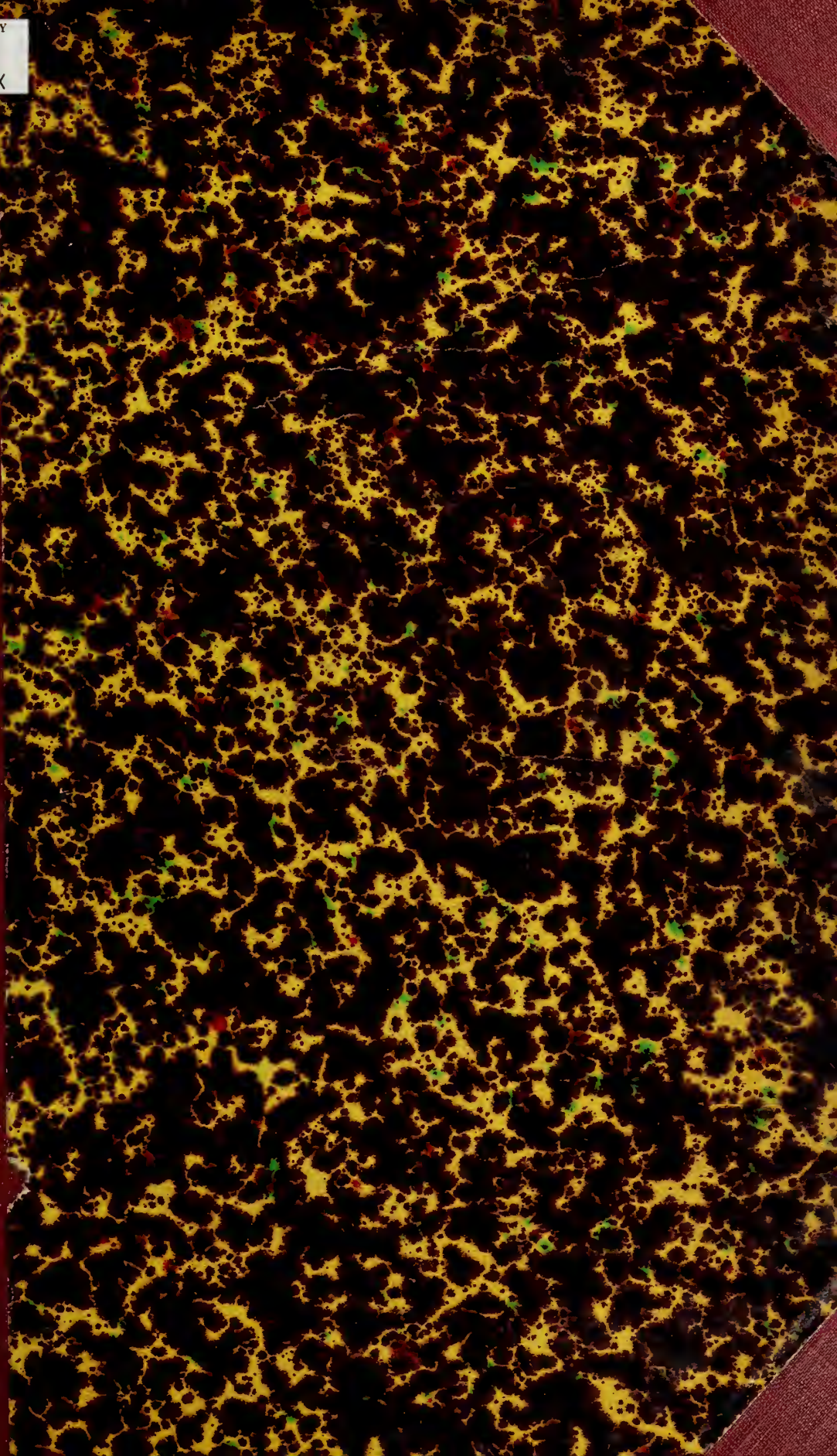


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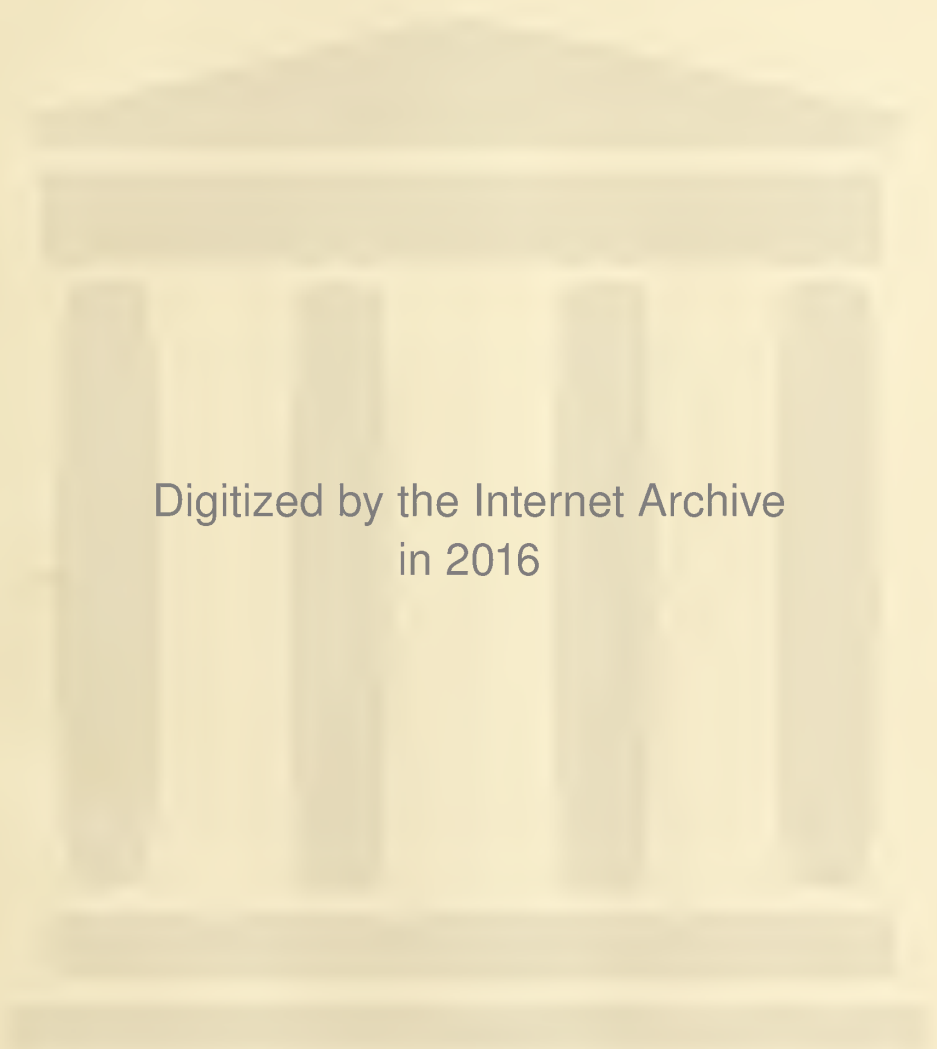


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OF THE

## KANSAS MEDICAL SOCIETY

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### KANSAS MEDICAL SOCIETY

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EDITED BY

**WILLIAM E. McVEY, M.D.**

UNDER SUPERVISION OF THE COUNCIL

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VOLUME XVI

JANUARY 1916 TO DECEMBER 1916 INCLUSIVE

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TOPEKA, KANSAS

1916

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## SOCIETY CALENDAR

SOCIETY	PRESIDENT	SECRETARY	MEETINGS
Atchison.....	T. E. Horner, Atchison.....	E. T. Shelley, Atchison.....	1st Wednes. ex. July, August
Allen.....	F. L. B. Leavell, Iola.....	J. G. Walker, Iola.....	2nd Wednesday
Anderson.....	A. J. Turner, Garnett.....	J. A. Milligan, Garnett.....	
Brown.....	B. J. Alexander, Hiawatha.....	W. G. Emery, Hiawatha.....	1st Tues. Jan. Apr. June, Oct.
Barton.....	M. F. Russell, Great Bend.....	T. J. Brown, Holsington.....	3rd Friday
Butler.....	F. A. Garvin, Augusta.....	J. R. McCuggage, Augusta.....	3rd Thurs. Feb. & each alt. mo.
Bourbon.....	L. W. Griffin, Ft. Scott.....	J. J. Cavanaugh, Ft. Scott.....	3rd Monday
Crawford.....	William Williams, Pittsburg.....	C. Mart Montee, Pittsburg.....	1st Tues. ex. July, Aug., Sept.
Central Kansas.....	E. A. Bowles, Ellsworth.....	B. H. Mayer, Ellsworth.....	2d Wed., June, Sept., Dec., Mch.
Cloud.....	Chas. Stein, Glasco.....	E. N. Robertson, Concordia.....	Last Thursday
Cowley.....	F. M. Wilmer, Winfield.....	C. T. Ralls, Winfield.....	3d Thursday
Chautauqua.....	J. C. Kirby, Cedar Vale.....	L. D. Tout, Cedar Vale.....	
Clay.....	E. A. Myers, Wakefield.....	G. W. Bale, Clay Center.....	2d Wednesday
Cherokee.....	Chas. T. Reid, Corona.....	F. L. McKinney, Galena.....	2 & 4 Wed., Sum.; 2d Wed., Win.
Coffey.....	J. C. Fear, Waverly.....	C. C. Culver, Burlington.....	Every three months
Dickinson.....	W. A. Klingberg, Elmo.....	J. N. Deiter, Abilene.....	1st Tues. Jan., Apr., July, Oct.
Doniphan.....	W. B. Campbell, Troy.....	W. M. Boone, Highland.....	Called
Decatur-Norton.....	F. D. Kennedy, Norton.....	C. S. Kenney, Norton.....	2d Tuesday
Douglas.....	E. J. Blair, Lawrence.....	Carl Phillips, Lawrence.....	Called
Elk.....	J. F. Costello, Howard.....	F. L. Depeuw, Howard.....	Last Wednesday
Franklin.....	F. L. Blunk, Ottawa.....	W. E. Michener, Ottawa.....	
Geary.....	W. A. Carr, Junction City.....	W. A. Smiley, Junction City.....	First Monday
Harvey.....	B. F. Hawk, Anthony.....	H. H. Hudson, Newton.....	
Harper.....	J. E. Love, Whiting.....	H. W. Gaume, Harper.....	1st Wed. Jan., Apr., July, Oct.
Jackson.....	D. D. Wilson, Nortonville.....	Chas. M. Siever, Holton.....	1st Wed. in Jan., Apr., July, Oct.
Jefferson.....	L. L. Uhl, Overland Park.....	F. F. Greene, Olathe.....	
Johnson.....	J. E. Hawley, Burr Oak.....	D. D. Allen, Mankato.....	
Jewell.....	J. W. Light, Kingman.....	C. W. Longenecker, Kingman.....	2d Thurs. ex. Summer months
Kingman.....	A. J. Smith, Leavenworth.....	J. L. Everhardy, Leavenworth.....	2d and 4th Mondays
Leavenworth.....	J. G. Missildine, Parsons.....	O. W. Dierker, Sylvan Grove.....	2d Thursday
Lincoln.....	A. W. Corbett, Emporia.....	O. S. Hubbard, Parsons.....	4th Wednesday
Labette.....	J. A. Naylor, Pleasanton.....	F. J. Eckdall, Emporia.....	1st Tuesday
Linn.....	W. E. Ham, Beattie.....	G. A. Paige, Pleasanton.....	2d and 4th Fridays
Marshall.....	J. C. Hall, McPherson.....	Eddington Eddy, Marysville.....	Last Thurs. July, Oct., Jan., Apr.
McPherson.....	L. A. Van Pelt, Paola.....	Q. W. Sprouse, Inman.....	
Miami.....	G. J. Goodscheller, Paola.....	John J. Harrington, Osawatimie.....	Last Fridays
Marion.....	E. E. Brewer, Beloit.....	Benton T. Prather, Peabody.....	2d Wednesday each month
Mitchell.....	W. H. Wells, Coffeyville.....	Karl A. Bleber, Tipton.....	3d Thurs. Mch., June, Sept., Oct.
Montgomery.....	W. A. McCullough, Delavan.....	J. A. Pinkston, Independence.....	3d Friday
Morris.....	L. A. Corwin.....	Albert Beam, Wiley.....	Called
Nemaha.....	A. M. Garton, Chanute.....	S. Murdock, Jr., Sabetha.....	Last Thurs. every other month
Neosho.....	F. M. Smith, Lyndon.....	Samuel Steele, Chanute.....	1st and 3d Wednesdays
Osage.....	S. J. Schwaup, Osborne.....	J. J. Curphy, Osage City.....	
Osborne.....		J. C. Henshall, Osborne.....	
Pawnee.....		A. E. Reed, Larned.....	
Pratt.....	Atcholl Cochran, Iuka.....	M. C. Jenkins, Pratt.....	
Republic.....	D. E. Foristall, Republic.....	H. D. Thomas, Belleville.....	2d Thursday in November
Rice.....	J. S. McBride, Lyons.....	J. M. Little, Sterling.....	Last Thursday
Reno.....	W. F. Schoor, Hutchinson.....	W. A. Seahorn, Hutchinson.....	4th Friday
Riley.....	A. H. Bressler, Manhattan.....	R. R. Cave, Manhattan.....	2d and 4th Monday
Stafford.....	Cyrus Wesley, Stafford.....	J. A. H. Webb, Stafford.....	2d Wednesday
Sedgwick.....	J. G. Darsey, Wichita.....	E. D. Kilbourn, Wichita.....	1st and 3d Tuesdays
Sumner.....	R. H. Shippey, Peck.....	H. A. Vincent, Perth.....	Last Thursday every quarter
Smith.....	J. K. Harvey, Salina.....	H. Morrison, Smith Center.....	Called
Saline.....	G. A. Nicholson, Plains.....	K. N. Moses, Salina.....	2d Thursday
Southwest.....	M. B. Miller, Topeka.....	T. L. Higginbotham, Hutchinson.....	Quarterly
Shawnee.....	J. J. Barclay, Grinnell.....	E. G. Brown, Topeka.....	1st Monday
Tri-County.....	M. H. Horn, Morrowville.....	D. R. Stoner, Quinter.....	Jan., April, July, Aug., Oct.
Washington.....	W. H. Young, Fredonia.....	W. M. Earnest, Washington.....	
Wilson.....	Geo. W. Lee, Yates Center.....	E. C. Duncan, Fredonia.....	2d Thurs. Dec., Mch., June, Sept.
Woodson.....	C. C. Nesselrode, Kansas City.....	A. C. Dinsgus, Yates Center.....	Tues. before 1st Wed. each mo.
Wyandotte.....		E. A. Reeves, Kansas City.....	Ev. 2d Tues. ex. Summer mos.



**THE JOURNAL**  
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Vol. XVI

TOPEKA, KANSAS, JANUARY, 1916

No. 1

**Methods and Value of Blood Transfusion.**

W. M. MILLS, M.D., Topeka, Kan.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

Transfusion of blood is blood transference from one individual into the vascular system of another, and is properly regarded as a genuine tissue transplant and not merely the introduction of a chemical mixture. The success of transfusion of today is due especially to the improvements of technique. With rigid asepsis, proper choice of the blood of the donor, with a rational study of the indications, transfusion has become a simple surgical procedure of incontestible value. The ideal technique makes four requirements: first, absolute asepsis; second, that the blood transfused neither contain clots nor substances that would cause clotting in the vessels of the recipient; third, ability to measure the amount of blood transfused; fourth, ease of performance for donor, recipient and operator.

The methods by which transfusion may be accomplished may be grouped under three classes; first, passage of blood directly from donor to recipient, avoiding contact with anything but intima of blood vessels; second, passage through foreign tubes connecting blood vessels of donor and recipient; third, employment of an intermediate receptacle between donor and recipient.

The first of the above named methods: the direct anastomosis of vessel to vessel was put upon a sound basis by Carrel. His method was to suture the artery of the donor directly to the vein of the recipient.

It requires especial training and surgical ability to perform this operation. The next steps in the development of this intima-to-intima method were the work of Crile, Elsberg, Soresi and others. Crile, whose work followed next in priority upon that of Carrel, devised a method by which the vein of the recipient was first drawn through a rigid ring and then doubled or cuffed back over the outside of the ring; then the lumen of the artery of the donor was dilated and drawn over the cuffed back vein.

Elsberg, following after Crile, and seeking to further simplify Crile's method, devised a cannula built on the "monkey-wrench" principle, adjustable to any sized vessel and which would encircle the vessel before it was cut. Elsberg applied his monkey-wrench cannula to the artery, cut the artery, cuffed it back and inserted it into a lateral opening in the vein, thus, as in the Crile method, bringing intima to intima and permitting the transfused blood to touch nothing else. The artery-to-vein method gives a positive pressure to force the blood from donor to recipient, but of course destroys an artery.

To avoid this destruction, Soresi devised his vein-to-vein anastomosis. His method unites one of the superficial veins in the arm of the donor to the external jugular vein of the recipient. A positive venous pressure is secured by a tourniquet applied to the donor's arm and this visa-tergo receives intermittent assistance from the respiratory negative pressure within the thorax. A possible further virtue of this vein-to-vein method is that the blood trans-

fused is introduced near the heart.

The second class of methods, as mentioned above, employs an intermediate tube between the vessels of donor and recipient, respectively. While it is theoretically possible, and has on occasion been so performed, yet the anastomosis of vein-to-vein through an intermediate tube is not much practiced because of the slow flow of the blood and the consequent easy clot formation; therefore this method (that of the intermediate tube), is practically limited to a union of artery to vein. A second general principle governing in these cases is the coating of the interior of the intermediate tube with paraffin or mineral oil, preferably paraffin. Tubes not so coated, even though highly polished, become quickly obstructed with clot; while those properly coated with the lubricant will maintain a flow from fifteen to thirty-five minutes.

Of the intermediate tube methods, those of Brewer and Bernheim are most widely used, although Tuffier is entitled to credit for priority.

Brewer's tubes are small glass cannulae, some with slight bayonet-like crooks in the middle to permit their easy adjustment between the opposing parts of donor and recipient, and all with a slight bulging at either end over which the open end of the vessel is slipped and behind which ligatures are applied to hold the vessels in place.

Bernheim's silver tube, which has my personal preference among the methods so far mentioned, is composed of two halves which can be joined by a slip joint to form the complete tube. Each half is beveled at the other end for ease of insertion into the vessel. One advantage of the Bernheim tube is that the two halves are introduced into the artery and vein of donor and recipient before the two arms are brought together, thus giving ample room for ease of operation and the work left to be done in a restricted space, merely the invaginating of the two parts of the slip joint, is reduced to a minimum. Another advantage of the Bernheim tube is the ease with

which the two halves, or either of them, may be removed from the vessel lumen and the vessel ends washed out and a new tube inserted should any clot obstruct the flow during the operation.

In performing transfusion by any of the above methods the technique is similar. A careful dissection of the blood vessels is necessary, with the least possible trauma to the vessel itself; all bleeding from the vessels must be carefully controlled and all exposed parts kept moist with salt solution and albolene. The radial artery of the donor is usually united to one of the superficial veins at the recipient's elbow, and the left radial should always be united to a vein of the left arm, or *vice versa*. The artery with its *venae comites* is exposed for about two inches; then the artery is dissected free from its accompanying veins and its branches are doubly tied with fine silk and cut. A bull-dog or spring clamp is placed on the vessel at the proximal end of the wound to control, without damaging the intima, the flow of arterial blood. The artery is ligated at the distal end and cut; so about one and one-half inches is free. From this point on, the technique varies according as the various methods are used. A short segment of the recipient's vein is dissected free, clamped and cut. The two arms are brought together and the union made by direct suture, cannula or tube. When this has been accomplished, the bull-dog clamp is removed first from the vein, and then from the artery—the rate of flow being controlled by pressure on the vein with thumb and forefinger. The average duration of flow is from twenty to forty minutes. After the flow has been stopped, the vessels are ligated and the wounds sutured. It will be readily seen that the operation is a rather delicate one; that there is no accurate means of measuring the amount of blood transfused; and that a good-sized artery is sacrificed.

The third group of methods of performing transfusion employs an intermediate receptacle to hold the blood during the transfer from donor to recipient. Here the blood, after being drawn from the donor,



may be defibrinated or have some chemical, such as sodium citrate or hirudin, added to delay clotting. It is absolutely necessary to prevent clotting during the transfer, and this may be done by making the transfer in less than normal coagulation time or by coating the receptacle to delay coagulation during a less rapid manipulation.

There is but one method of transfusion employing intermediate receptacles whose cardinal principal is to accomplish the blood transference in less than normal coagulation time, namely, the syringe method. This method, according to Hartwell, was first successfully used and reported by von Ziemssen; and in recent years reports of its successful use have been made by David and Curtis, and Cooley and Vaughn. Their respective methods resemble each other in most essentials; though Cooley and Vaughn advocate the addition of five per cent by volume of a normal salt solution to the blood in the syringe; this, they contend, lengthens the coagulation time of the blood transferred.

The most popular method of syringe transfusion is described by Lindemann, in the *American Journal of Diseases of Children*, July, 1913, and is simply an improvement of previously described syringe methods. Lindemann uses what he calls a "battery" of some twelve alboline coated, glass syringes, each of 20 c.c. capacity and of "slip-joint" type. The veins of donor and recipient are entered by subcutaneous puncture with a nest of three cannulæ; these are specially designed to prevent injury to the vessel wall. With two operators working, a syringe is filled by one of them from the donor and is at once passed to the fellow-worker, who injects the contents into the recipient's vein. Next, the syringe is washed in normal salt solution before being passed to first worker, to be refilled. The blood is withdrawn more slowly from the donor's arm than it is injected into that of the recipient so to prevent clotting in the metal cannula in the vein of the recipient, a flow of salt solution is kept up in this cannula during the intervals when blood injections are not passing through. By

this method Lindemann has transfused as much as 1,500 c.c. from one donor in fifteen minutes; and the average duration of time that he reports blood being in a syringe is 12 seconds.

By the syringe method no blood vessel is sacrificed; numerous transfusions can be made from the same donor, into the same vein of the recipient; the amount of blood is definitely measured; and the operation is made much less burdensome for all concerned. So a new field is opened up for the wider application of transfusion.

The basic principle of the other methods employing an intermediate receptacle is to draw off the total amount of blood to be transfused into a receptacle lined with hardened paraffin, which serves to delay coagulation for some time; and then connect it with the recipient's vein and empty the contents, using air pressure to force the blood to flow. This has been developed by Dacid and Curtis, Kimpton and Brown, and recently much improved by Satterlee and Hooker. The difficulty with this type of transfusion is that the complete coating of these large cylinders with paraffin is quite a trick, and the failure to have a good coating will result in coagulation. However, this method has given good results in the hands of many surgeons, and has many good points in common with the syringe method. So much for technique.

The dangers of transfusion comprise those attendant upon the operation itself, as: (1) acute dilation of the patient's heart, due to the too rapid injection of the donor's blood, and manifesting itself by dyspnoea, precordial distress, cough and cyanosis with the pulse increasing in rate and becoming irregular; this condition may be met by merely stopping the transfusion; (2) embolism from injection of a blood clot or air, and (3) sepsis, the danger of this being no greater than in any other operation. These dangers are all avoided by proper technique.

A danger manifesting itself somewhat later than the above is transmitted disease, to avoid which a healthy donor should be selected. Proper precautions are a Was-

sermann test for possible syphilitic taint, and a thorough examination for tuberculosis.

Dangers requiring special technique for their prevention are; hemolysis and agglutination. In the consideration of these I am following Ottenberg and Kaliski (under date of December, 1913), as one of the authoritative works of recent date. These authors show conclusively that, by testing the serum and washed red corpuscles of the two bloods to be used in varying combinations, these reactions can be foretold and therefore prevented in most cases by the selection of a different donor. There may be either direct hemolysis, in which there is laking of the donor's cells by the patient's serum and in which it is the patient who is diseased, or reverse hemolysis, in which the patient's cells are laked by the serum of a diseased donor. The hemolysis either of the patient's cells by the donor's serum, or of the donor's cells by the patient's serum, is a pathologic condition, that is; it does not occur unless there is disease in either the donor or recipient. In case there is disease, it is the serum of the one diseased that is activated by the disease toxin to hemolyze the cells of the other party to the transfusion. Hemolysis of either group of blood cells contraindicates transfusion between these two individuals. The occurrence of hemolysis is later noted by hemoglobinuria and is less liable to occur when the blood transfused is secured from a blood relative of the patient.

Agglutination, on the other hand, is not a disease phenomenon; for it may occur between two bloods that are perfectly normal. Transfusion is contraindicated only where there is agglutination of the donor's cells by the patient's serum. In case the cells of the patient are agglutinated in a preliminary test in a tube by the serum of the donor, yet the latter is introduced in such a comparatively small quantity into the circulation of the patient that agglutination within the body of the patient does not occur.

Granting a healthy donor, the danger of

either hemolysis or agglutination is so remote as to be disregarded in emergency and can be avoided through laboratory tests in other cases. Bernheim has collected 800 reported cases of transfusion with an incidence of hemolysis in 2 per cent and a mortality of 0.5 per cent due to this cause.

The use of transfusion is based on the fact that transfused blood is an ideal substitute for blood lost in acute hemorrhage; in pathologic hemorrhages is a powerful hemostatic; and in critical cases of secondary anemia it may act as a stimulant.

#### AS TO INDICATIONS.

Acute hemorrhages: Here the consensus of opinion as gleaned from the literature is that when properly managed, transfusion gives "brilliant" results. Some of the conditions of this class indicating transfusion are:

Acute hemorrhage after injury or operation (traumatic or post operative).

Extra-uterine pregnancy or uterine hemorrhages from various causes as fibroids, miscarriage, etc.

Hemorrhage from gastric and duodenal ulcers.

Intestinal hemorrhages in typhoid.

A general principle governing the use of transfusion in these acute hemorrhages is that where the bleeding point must be dealt with surgically, transfusion should precede the surgical treatment of the ulcer, or ruptured tube or other source of hemorrhage, and should be of large quantity. Otherwise the transfusion should be of smaller quantity so as to secure the hemostatic effect without raising the blood pressure too much or delayed until the quiescent stage of the hemorrhage, when the vascular system should be "filled to the brim." Shown by the clinical evidence of rosy color and improved pulse and blood pressure. Further conditions indicating transfusion are:

Severe shock, blood transfusion here has proved more effective than all other measures (Crile).

GAS POISONING.—The oxygen-carrying power of the blood is destroyed, so normal



red cells must be supplied to carry oxygen.

**PELLAGRA.**—Here Cole, of Alabama, reports 60 to 80 per cent cures out of about twenty cases, and Bernheim reports one case cured.

**TOXEMIAS OF PREGNANCY.**—A few favorable cases have been reported cured by transfusion from a second gravida.

**INFECTIONS.**—Transfusion is of no benefit in acute infections, and the reported results are far from uniform in the chronic ones; though in the chronic type a patient may be stimulated and his anemia relieved by this therapy; so a critical stage of the disease can be passed safely.

**ANEMIAS, LEUKEMIAS, SPLENIC ANEMIA**—In the leukemias no improvement has as yet been shown; in pernicious anemia reports are somewhat conflicting, but indicate that while there is no cured case on record, yet the anemia is frequently improved for a time. Unless the blood generative mechanism is stimulated or the cause of the blood destruction removed, no lasting benefit can be expected. It is probable that frequently repeated small transfusions may be of more benefit than a single large one.

The result of transfusion in some of the pathologic hemorrhages are as brilliant as in acute. There is here lacking some element necessary for quick coagulation, as fibrinogen, prothrombin, blood platelets, etc., and this lacking element is supplied by the transfused blood.

Hemorrhages due to jaundice are arrested, and permanently so, if the cause of the disease can be removed by surgical measures. The bleeding of hemophilia is arrested for some time, although the disease is not cured, and there may be subsequent hemorrhages.

It is in cases of hemorrhagic disease of the new-born that some of the most striking results are seen. Here the mortality was formerly estimated as high as 75 per cent; while with transfusion restoring the lost blood and stopping the hemorrhage, the figures are more than reversed. Lepinasse reports fifteen personal cases with two deaths; and both were syphilitic. Vin-

cent has reported nine cases with one death. The writer has had one critical case cured by syringe transfusion. Before resorting to transfusion of human blood, the indications point to the injection of any serum, though preferably human serum; as by this means many cures have been reported in hemorrhagic disease of the new-born, when the hemorrhage has not progressed to the point where the loss of blood itself is a menace to life. On the other hand, many cases have been cured by the transfusion of human blood after failure to secure results by the injection of serum alone.

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The Board of Health of New York City has given its permission for the slaughtering of horses and the sale of the flesh as food.

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The estate of the late Dr. Rudolph Witthaus goes mostly to the New York Academy of Medicine. The estate amounts to about \$100,000, and the income is to be used for the benefit of the library.

## **Pyloric Obstruction in Infancy.**

G. L. MCGONIGAL, M.D., Kansas City,  
Kas.

Read before the Kansas Medical Society, Kansas City, Kan.,  
May, 1915.

Case 1. Baby Kelly. St. Luke's Baby Camp.

**FAMILY HISTORY:** Negative. Male. Second child. Pregnancy and confinement normal. Weight at birth, nine and one-half pounds. Breast fed. Started to vomit at the end of second week. Vomiting projectile in character. Would vomit after each feeding. If did not vomit after each feeding would vomit larger quantity than taken at last feeding. When I saw child it was three months old. Had been vomiting for six weeks. Two weeks before I saw baby had been placed on Eagle Brand, the panacea for all the ills of infancy. Child only weighed six and one-half pounds. Very emaciated. Examination of head, chest, extremities, negative. Examination of abdomen negative except very prominent upper epigastrium. Gastric tympany extending below umbilicus. No tumor mass palpable in epigastrium. About third day visible peristaltic waves.

**DIAGNOSIS:** Pyloric spasm or stenosis. Child placed on stomach washings. Mother had used breast pump, still had milk supply. Child put to breast every three hours. Child in such a weakened condition nursed very little. Barley water given freely between feedings. Large quantities of mucus removed from stomach at each washing. Stomach washing once a day for first week. No vomiting at end of first week. No gain in weight. Stomach washed every other day the second week. Child had gained one-half pound at the end of second week. From that time stomach washings as indicated. As soon as it would start to vomit would wash stomach. This occurred about twice a week. The stomach washing continued once a week. Child continued to gain in weight about one-half pound. Weight at present twenty-five pounds. Well nourished fine looking baby.

Second case. Male baby. St. Anthony's

Baby Home. Weight at birth, seven and one-half pounds.

**FAMILY HISTORY:** Father died Pulmonary T. B., a month before baby was born. Fed for first two weeks on the breast. Child started to vomit at the end of second week and placed on skimmed milk formulæ. When came to home weighed six pounds. History that it vomited every feeding since two weeks old. Then it was six weeks old. Had been vomiting for a month. When child came to hospital, placed on modified butter milk formula, three ounces butter milk, two ounces barley. In hospital would only vomit after evening feeding, when it would vomit large quantities. Vomiting projectile in character. Constipation very marked. Could hardly get bowels to move. The feces would be hard and small.

Examination showed very emaciated infant. Stomach showed distinct peristaltic waves. No tumor could be felt. Examination: Head, chest, extremities negative.

**DIAGNOSIS:** C. H. S. or pyloric spasm. Stomach washings instigated. Vomited few times after washings started. At end of two weeks vomiting had ceased. Month after, no waves could be made out. Child gained pound and half. Bowel movements regular; normal in consistency and color.

This child represents a type of institutional child. Did not gain as fast as the first case. Last winter child developed a broncho-pneumonia and died. Autopsy denied; could not see what stomach showed at this time.

Case Three. Baby Dunlap. Male. Weight at birth, seven pounds.

**FAMILY HISTORY:** Negative. Normal pregnancy and confinement. Baby fed on Eagle Brand. (No breast milk.) Baby well up to fifth week excepting constipation. Never had voluntary movement except by enema. First saw baby at seventh week. Had started to vomit fifth week, and when I saw child had vomited every feeding since. Vomiting projectile in character. Examination revealed well nourished baby. Head, chest, extremities



normal. Prominent in epigastrium. Visible peristaltic waves passing from left to right. No tumor mass palpable. Stomach washing daily. Changed feeding to modified cow's milk formula: Cow's, two ounces; Eagle Brand, one teaspoonful; barley, three ounces.

In taking up the subject of "Pyloric Obstruction in Infancy" we find in the literature two conditions described; namely, congenital hypertrophic stenosis of the pylorus, and pyloric spasm.

These two conditions as described have a symptomology almost identical, so that a differentiation between them is almost impossible, and the treatment is the same, that either surgical or medical which we take up later.

All we know of pyloric stenosis has appeared in the literature since 1897. This condition is not uncommon but a good many times not diagnosed. The male sex seems to predominate. In the latest series of fifty-five cases reported by Holt, forty-nine were males, six females. It generally occurs in breast-fed babies. This is of considerable importance in distinguishing it from gastric indigestion, which its symptoms more frequently resemble.

The clinical picture in a typical case, infant usually breast-fed which has shown no signs of a disturbance of digestion, begins at the fourth or fifth week of life, very abruptly with forcible vomiting, marked constipation, steady loss of weight, and symptoms of malnutrition.

Examination reveals definite gastric peristaltic waves, most cases palpable tumor in pyloric region size of olive, and signs of failing nutrition.

**DIAGNOSIS:** The most constant and earliest symptom is vomiting. Some authorities say the diagnosis can be made on this symptom alone. The vomiting of the stenosis differs from the vomiting usually seen in young children. It occurs soon after nursing, often when the child is still at the breast. The vomiting is forcible and projectile in character, fairly shot out of the mouth for four or five feet in large amounts, the entire contents of the stom-

ach. Generally the vomiting is repeated after each feeding. If the vomiting is infrequent and does not occur after each feeding the amount vomited at one time is much larger than amount taken at last feeding. (Second case.)

The vomiting differs from the regurgitation seen in infants in the amount vomited and the force of the vomiting. There is no impairment of appetite. Child will again take breast immediately after vomiting. Vomiting is persistent in character, may vomit over a period of weeks. Changes in feeding have no effect on vomiting. This is of importance as we said in beginning, these babies are all mostly breast fed, and the first thing that is recommended is to take the child off the breast and put it on some form of artificial feeding. We find that it vomits the artificial feeding just as far as it does the breast. The baby should never be taken off the breast because it vomits, until we know what is the matter with it.

The gastric peristaltic wave is the next important symptom. Lowenberg thinks this symptom pathognomonic of pyloric stenosis, but not necessarily of complete obstruction. These waves are not at all easy to see in some cases. The abdomen should be watched carefully for a period of ten to fifteen minutes, and this should be done immediately after feeding, as they are more apt to be seen when the stomach is full. I have observed that these waves are very prominent immediately after lavage. These waves may be likened to a series of balls rolled under the skin. First we have an elevation beginning to the left of the umbilicus, and proceeding across the abdomen to the right. When wave half way across abdomen another one makes its appearance. It is very important that this symptom be recognized, and not confused with the intestinal peristalsis; for such an authority as Holt says he would not make a diagnosis of stenosis without this symptom.

A palpable tumor in the region of the pylorus is the next symptom of importance, not essential to the diagnosis nor

easy to make out. Although Lowenberg would make this symptom the diagnostic point between congenital hypertrophic stenosis and pyloric spasm. We can hardly agree that this finding is the diagnostic point, as we see in the literature cases that have gone to operation or autopsy invariably have a thickened hypertrophied pylorus that in most cases could not be made out prior to operation or autopsy. Because we do not find by external examination we should not say it does not exist.

Some suggest that the infant be given an anesthetic to feel tumor. We do not think it justifiable to subject any infant to the dangers of an anesthetic to find a tumor that is not of importance to the diagnosis.

Great stress has been laid upon the amount of gastric retention by some authorities as important not only in determining the fact of obstruction but also the degree. That is, if we empty the stomach and feed a certain quantity, and three hours later aspirate the stomach contents or after the last night feeding we aspirate the stomach content in the morning and measure the amount aspirated and see how much passed through the pylorus.

Constipation uniformly present, very few cases do we have history of obstruction.

The constipation due to a mechanical absence of food from the small intestine. Sometimes stool meconium in character, other times small, fecal stool.

Malnutrition and its symptoms follows in the wake of the above symptoms and should be an argument for early diagnosis. Then our percentage of cures will be greater by either method of treatment, that is surgical or medical.

**ETIOLOGY:** There have been a great many theories advanced to explain this condition by a great many writers. The theories that have been advanced are as varied as the number of men investigating this condition. In a review of the literature on the subject made by Dr. Broderick in 1909, he thinks the view of Cautley, that stenosis is due to a developmental

hyperplasia of the circular muscular layer of the pylorus. This theory is yet to be disproven.

**PATHOLOGY:** Pathologists tell us we find in this condition that there is a numerical increase and also a hypertrophy of the circular muscle fibers of the pylorus, which gives rise to a small tumor, size of olive, obstructing the lumen of the pylorus. The stomach, trying to empty itself, contracts more forcibly, giving rise to peristaltic waves. Stomach greatly distended, mucus membrane thickened and edematous.

**DIFFERENTIAL DIAGNOSIS BETWEEN PYLORIC SPASM AND STENOSIS:** Although this condition spoken of as congenital does not make its appearance soon after birth or during the first week. The history of vomiting the first few days of life is strongly against stenosis, and the abruptness of the symptoms.

The explanation of this is that pyloric spasm plays an important part. Again the disappearance of the symptoms in a few weeks point to the same direction; that is, pyloric spasm.

But on the other hand, when these cases have been examined at operation or at autopsy a marked hypertrophy of the pylorus has been invariably found, principally involving the circular muscular layer whose fibers are increased, not only in size but in number.

A pathologist thinks that it is to this hypertrophy that the stenosis is due. According to this view our symptoms have an organic rather than a functional basis, and it is very difficult to reconcile the clinical findings with the pathological findings.

I think the concensus of opinion among pediatricists at the present time is that expressed by one of the leading children's men of this country, "that persistent spasm of the pylorus without hypertrophy is yet to be proven." Term pyloric spasm should be dropped from our nomenclature and the two conditions that are confused are the same and the difference is of degree rather than clinical symptomology, and the question involved is whether there



is obstruction enough to endanger the life of the infant and how best to relieve it.

Whether a pure pyloric spasm exists without hypertrophy, or whether the spasm is due to the stenosis, is still an unsettled question. I think the important point in the differentiation is the degree as determined by the X-ray, which we will take up later.

We will now take up the much debated question of treatment. The recognized medical treatment of this conditions is lavage together with careful and scientific feeding, while the recognized surgical treatment is posterior gastro-enterostomy.

Robert Hutchison in England; Beroid and Stark, German writers, report a large percentage of recoveries without operation, while on the other hand, Richter of Chicago, Downes, Scudder of Boston report favorable results with operation. The mortality of this condition by any method of treatment is estimated at fifty per cent.

In subjecting an infant with this condition to an operation we subject it to all the risk accompanying a major operation. We may classify our surgical risks in this condition as: Essential and accidental.

**ESSENTIAL:** First, anesthetic; second, shock; third, non-union due to impoverished condition these cases get into before they are diagnosed, and difficulty in feeding these cases, post operative.

**ACCIDENTAL:** Faulty technic, leakage, etc., and all the reasons why gastro-enterostomy sometimes fails to cure an adult.

There are several other operations advised because of shortness and simplicity, to relieve this condition, as pylorotomy, pyloroplasty and divulsion. But gastro-enterostomy is the method used by the men who do the most of this work. The medical risks are small compared to the surgical.

Although we think very much of the medical treatment, there are certain indications for operation. First: No cessation of vomiting or gastric peristalsis by stomach washing or diet. Second: Steady loss of weight, two ounces per day. Third:

Much gastric retention. Absence of fecal stool, and last, but of more importance, are X-ray findings, after giving a bismuth meal, which we will now take up later between slides.

And in conclusion we will again repeat that this condition is not uncommon but not often diagnosed; that the diagnosis is comparatively easy. A careful history of persistent vomiting in healthy infant that came on suddenly. Finding the peristaltic waves make the diagnosis.

That the success of either treatment we pursue depends on an early diagnosis. That all cases should be given a chance to get well without operation, and when they do not respond to lavage, we should be determined in operating by our X-ray findings.

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### Home Treatment of Tuberculosis.

DR. W. R. PENNINGTON, Ottawa.

Read before the Franklin County Medical Society at their September, 1915, meeting held at Ottawa, Kan.

#### WHAT THE PHYSICIAN SHOULD DO WHEN IN ATTENDANCE UPON A CASE OF TUBERCULOSIS.

The law requires a physician attending a case of tuberculosis to report the same promptly and fully to the local health officer of the jurisdiction in which the case occurs.

For the good of the patient and the safety of the public, physicians should instruct tuberculous persons in the means of preventing the spread of tuberculosis. They should at all times co-operate with the recommendations of the local board of health or the local health officer, when made in accordance with the recommendations of the State Department of Health. While it is the privilege of the physician to instruct, it is the duty of the health officer to do so; and the official performance of his duty should at all times be duly recognized, in order that the interests of the public may be subserved.

Co-operation between all interests, the sick person, the physician, the health officials, and the anti-tuberculosis society

will best work for the suppression of tuberculosis in Kansas.

#### TUBERCULOSIS IN KANSAS.

Vital statistics collected during the past five years reveal the astounding facts that there are between 1,100 and 1,200 deaths from tuberculosis in Kansas annually, about 100 each month, over three every day; when it is remembered that this is a preventable disease and that the victims are usually in the early years of young manhood and womanhood, the most useful and promising years of life, the importance of a better understanding of the means of prevention and of the necessity of a state institution for the care of the tubercular poor is more forcefully presented. Tuberculosis is the most widely spread and deadly disease that affects humanity. It is infectious and is communicated from the sick to the well.

#### HOME TREATMENT.

Pulmonary tuberculosis is curable, and to effect a cure two things are primarily necessary, nutrition and ventilation.

Diet—The food should be highly nutritious and prepared so that it will appeal to the palate. It must of a necessity be of a mixed diet to comply best with the above requirements. Proteids are of first importance, all kinds of meats and presumably some fats. Eggs are very nutritious and taken in the form of egg nog are very efficacious, but the patient easily tires on eggs and they must be used liberally in preparing other foods as salads, soups, dressings, custards, omelets, vegetables, as peas, beans, lentils, rice, fats, butter, oil, bacon, cream cheese and fatty cheese. Milk in large quantities should be used.

#### CARE OF THE MOUTH.

The patient must be careful to cleanse the mouth thoroughly several times a day with some antiseptic solution. He should also be frequently cautioned against swallowing the sputum, but should spit it into spit cup.

also be frequently cautioned against swallowing the sputum, but should spit it into spit cup.

Medical Treatment—Creosote and cod liver oil probably leads in therapy of tuberculosis.

#### TREATMENT OF TUBERCULOSIS.

Cleanliness of the Skin—Disinfection of contamination of feces, urine or pus, confiscation of diseased meats and regulation of dairies and inspection of cows are important, but the destruction of infective sputum is the prime indication. It is well to regard all sputum as dangerous, and to teach the public and patient this doctrine.

Tuberculosis as well as pneumonic grippal and other sputa must be destroyed. An appeal must be made to the conscience of selfishness of tuberculosis patients, setting forth the risk of autoreinfection. Patients should carry small spit cups of which Dettwillers are the best. Sputum should be destroyed by burning or boiling before it dries. Spittoons are dangerous. The patient should sleep alone. The bed clothes, linen and eating utensils should be carefully steamed or boiled. Rooms should be cleaned with moist cloths and should be swept with windows and doors open.

The danger of swallowing sputum must be clearly set forth, and the mouth should be washed out with some antiseptic solution before eating. Individual prophylaxis includes the increasing of physiological resistance, the maintenance of general health and the aiding of sound development of children. Weakly children should be brought up in the open air, judiciously fed, watched during acute infection, kept but few hours in school, sent into the country during vacation, taught moderation and later, should be informed as to the danger of alcoholism, sexual excesses and infection.

#### HYGIENIC TREATMENT.

The three great factors are fresh air, proper food and rest. Patients where treated in sanatoria and those at Sarnac and many others have given such excellent results that institutions of this class are growing in number. Results depend on first the extent of the disease, the condition of organs other than the lungs, as the pleura, intestines, larynx and heart and the



social and financial status of the case.

Dettwiller states that 30 per cent of his cases recovered and 40 per cent improved. One of the chief values of sanatorium treatment is that the patient learns the lessons of living properly which too often in general practice is not sufficiently imposed upon him.

#### FRESH AIR.

This is the chief hygienic factor in treatment at home in sanatoria or in change of climate. Treatment at home for financial reasons is especially important, as but 5 to 10 per cent of tuberculous people are able to leave home. The patient should be carefully clothed and should recline in the sun with the windows of his room open. At night the windows should be kept open, the patient's bed can be brought close to an open window from which a window tent of canvas enclosed the head and leaves him out of doors. Rain, snow, dampness and extreme cold are no contraindication, nor are fever, cough, hæmoptysis, but wind, dust and sudden variations in temperature are to be avoided. Very thick clothing, so frequently worn among the poor, is unhygienic. Acute cases and advanced type should generally be kept at home. Extreme care in disinfection is imperative, but the home itself becomes a menace to the family.

Sanatorium treatment offers the advantage of strict discipline, systematic living and the constant presence of a physician who regulates the details of every day life, gives explicit directions and cheers the patient. Change of climate was considered absolutely indispensable. Now it is said to be not without influence. No climate is specific. High altitudes offer the advantages of purer air, stimulation of breathing, increase of vital lung capacity, increase of the chest dimensions. High altitudes are best adapted to suspected cases to those with limited or incipient lesions to those with slight cavity formation and little emaciation. Slight fever or slight hæmoptysis are not contraindications to such climate; weak heart, nervousness are contraindicative.

#### NUTRITION.

Most physicians recommend five or six meals daily, but some achieve better results by giving but three meals, whereby the stomach is allowed to rest. The staple diet is meat, eggs, milk, including cream and butter. A liberal mixed diet should be given of meat, fatty meats, fish, fruits, etc.

#### TO ASSIST DIGESTION.

The extract condurango, strychnine 1/30 before meals are valuable appetizers. Milk should be given up to one or one and one-fourth quarts daily. Raw eggs are often given between meals, beginning with one and increasing to four three times daily, the taste being disguised by orange juice. Tobacco should be interdicted.

Rest is one of the essentials of Dettwiller's therapy. Exercise destroys tissue, often induces anemia and irritates the heart. It is distinctly contraindicated by fever, emaciation, rapid pulse, nausea and coughing.

It has been well said that too many cases of phthisis walk into their graves.

#### COUGH AND EXPECTORATION.

Control cough as much as possible. The sputum is the great source of danger, and must be destroyed by fire before it dries. Never swallow the sputum under any circumstances, and never spit in a pocket handkerchief. Always expectorate in a sputum box, and always hold a piece of cheesecloth before the mouth during the act of sneezing and coughing. Use cheesecloth only once and then burn. These precautions are necessary to protect yourself from reinfection, the danger of which is even greater than that of giving the disease to others.

#### CLOTHING.

Always dress warmly and comfortably. Waistbands and corsets must allow free and easy breathing. Chest protectors should never be worn. Never get overheated. Never get chilly. Use wraps. Fur coats and rugs or blankets are necessary for sitting outdoors in winter.

## BATHS.

Warm bath, followed by cold sponge, at least once a week at bedtime and a cold sponge, at least to the waist, every morning.

Always stop any medicine that upsets the stomach.

The bowels must be kept regular.

Do not be alarmed should you have a hemorrhage, simply go to bed and notify your family physician.

## A DAILY ROUTINE.

7:30—Awake, a glass of hot water. Cold sponge.

8:00—Breakfast.

8:30—Out of doors, sitting or reclining.

10:30—Lunch—milk and eggs.

11:00—Exercise if permissible.

11:30—Rest until dinner.

1:00—Dinner.

1:30—Out of doors, sitting or reclining.

3:30—Lunch—milk and eggs.

4:00—Exercise if permissible.

5:00—Rest outdoors, lying down.

5:30—Supper.

6:00—Out on good nights.

9:00—Lunch and bed.

TREATMENT OF INCIPIENT TUBERCULOSIS—  
RULES AND SUGGESTIONS.*Exercise.*

None if feverish.

None if blood in sputum.

None if losing weight.

None if pulse is fast.

None if short of breath.

Regular, systematic and gentle exercise, rain or shine, for not more than one-half hour twice daily is permissible if none of the above symptoms are present. Always bearing in mind:

Never to get out of breath.

Never lift heavy weights.

Never get tired.

Never run.

Go slow about everything.

*Food.*

Three full well-balanced meals daily.

Meat at each meal—beef, mutton and bacon preferred.

Eggs, 2-6, and milk, 6-8 glasses, daily if losing weight and the digestion permits.

The digestive powers are usually far greater than the appetite indicates. Food should be taken as a duty even when there is no desire to eat, but care must be exercised not to overcrowd the stomach.

No alcohol.

*Outdoor Life—Day.*

Remain out of doors, rain or shine, winter or summer, from eight to ten hours. Accomplish this by gradual exposure. Keep head out of sun on warm days. Avoid draughts and seek the sheltered part of a veranda in stormy weather.

*Night.*

Remain in bed from eight to ten hours. Sleep out of doors if possible and, if not, always have windows wide open. Avoid draughts on the head and too many bed-clothes.

## DISINFECTION.

*Disinfection After Death, Recovery, or Removal*—After death, recovery, or removal there should take place, under the supervision of the health officer, the most thorough and complete disinfection of the house and the contents of the house in which there has been a case of tuberculosis. It is far better for the community and cheaper for the board of health to pay a competent man to see that this is properly done than to take the risk of its not being well done.

*Preparation of Room and Contents for Disinfection*—All openings into the room should be closed, excepting the door. If there are any cracks, or open spaces, key holes or stovepipe holes, paste over with strips of cloth or paper. Clothing, bed covers, etc., should be removed from the bed and hung on lines stretched across the room. Mattresses and pillows should be opened and contents exposed. All drawers, chests or trunks in the room should be opened, contents removed, and spread out on the floor. When disinfectant is placed in the room, close the door, seal up any cracks or openings around it, and leave the room closed from six to eight hours. After

sufficient time has elapsed, open all windows and doors, allowing free circulation of air for an hour or two. If weather will permit, remove all articles into the sunshine.

#### HOW TO DISINFECT.

*Formaldehyde*—Disinfection of rooms by formaldehyde (formalin) is accomplished in four ways:

1. By the distillation into the rooms of a 40 per cent solution, in the proportion of not less than eight ounces of formalin for each one thousand cubic feet of air space.

2. By the addition of the solution of formaldehyde to permanganate of potash, in the proportion of about five ounces of permanganate to ten ounces of a 40 per cent solution of formaldehyde for each one thousand cubic feet of air space, rapid chemical action is set up and formaldehyde gas evolved in a very short space of time. A tin vessel with tall sides is necessary to prevent the materials running over the sides during the process.

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#### Typhoid.

N. C. SPEER, M.D., Osawatomie.

Read before September Meeting Miami County Medical Society.

During July of this year, we were visited by an epidemic of typhoid fever, sudden in its onset, widespread over the town, and new in our municipal experience, creating considerable excitement at home and securing some undesirable publicity in adjacent communities.

The state epidemiologist, Dr. Sippy, came early to investigate sanitary conditions and to assist in locating the source of the epidemic. His decision was that it was produced by a carrier, possibly a tramp having the disease, who had contaminated several drinking places.

At the railroad shops, seven were infected in one day at the same drinking place. At a public boarding house, eight others contracted the disease, one of these having taken a single meal there just fourteen days before she had fever. Other cases were more sporadic, and could not be so accurately traced.

During the epidemic, I saw seventeen cases, four went to the hospital, one was in consultation, one was a railroad employe, who preferred his family physician when he was informed he had typhoid, one was ambulatory but with positive widal, leaving ten bedside cases. No abortive or ambulatory cases that showed a negative widal were considered in the report. All these cases had the petechæ, one had epistaxis, all had the so-called intestinal click, all had characteristic temperature, all had some diarrhea, all had fever for at least twenty-one days, all had nausea, all had severe frontal headache, and a temperature above 103 degrees, and in some cases considerably higher. There was no delirium, little tympany, no pronouncedly coated tongue, no sordes, and little abdominal pain in any cases. Insomnia was absent after headaches were relieved, bronchitis was found in several cases, and neuritis of both arms occurred in one case. A pulse rate of 100 was rarely exceeded except in four cases, two children and two adults, who had a rate of 110 to 120. In the second week a pulse of 80 was common, and during convalescence it was as low as 60.

**TREATMENT**—One of the cardinal points in the treatment of typhoid is complete rest, both mental and physical. The exclusion of any except the immediate family and those required for nursing, should be insisted upon, even in mild cases, for mild cases should be kept so. The moving of a patient in bed is inadvisable except the changing of posture to prevent hypostasis. I believe the disregard of this precaution, and the permitting of mental strain and worry, has often led to serious results.

For the reducing of high temperature, an ice cap has proved adequate in moderate cases, the patient transferring it from one part of the body to another at will. Few in this series required iced water bathing except for the first week.

**AS TO THE ADMINISTRATION OF MEDICINE**—In the acute stage, all received the so-called quinine test, with the ordinary run of catharsis. During the whole time of active treatment, I used a preparation of



pepsin and H.Cl, administered at three hour periods during the waking hours. This was to counteract the lack of gastric secretion always found in typhoid.

Hexamethylenamine in five grain doses was given three times daily for its bactericidal effect, and was continued well along into convalescence. Trional was given at night if patients did not sleep well. Nurses were advised never to waken a patient from a natural sleep and, unless to meet special indications, nothing except food was given during the night, and that only when awake.

For abdominal pain, present in two cases when temperature was highest, I made sparing use of opium. Castor oil was administered each morning at seven-thirty if indicated. If there was a satisfactory bowel action each day, no laxatives were given, as in typhoid of all things, we wish to avoid excessive peristalsis.

The only departure from accepted rules of treatment has been in the diet. During the last three years I have been using a solid or semi-solid diet, with most favorable results. In this time I have given no sweet milk, believing that the curd which it forms is an irritant to the intestinal canal, and is a rich culture medium.

I had a fatal case four years ago which led me to suspect that the milk diet was causing trouble, and inclined me to consider seriously, various articles I had read, advising a more liberal diet and condemning milk. This patient had a number of copious hemorrhages, and in these stools were many solid scybalea formed from milk. A review of past cases then led me to wonder if much of the tymany, nausea, diarrhea, hemorrhage, pain and semi-starvation in my patients, might not be due to the milk diet.

The number of cases with different diet since that time may not be sufficient to give a positive answer to that question, but are at least of statistical value.

The diet is somewhat as follows: All fruit juices, baked apples, stewed peaches, custards of all kinds, milk toast, crackers in limited quantity, soft boiled or poached

egg, bacon, all meat broths, oyster soup, boiled rice, baked potatoes, the juice of broiled steak, ice cream, malted milk, buttermilk, tea, coffee, cocoa, and so forth. Not all of these foods were given to any one patient, but every one of them was used in the series.

The diet was varied from day to day, and each questionable food was carefully tested out with each patient. Because of this being somewhat in the nature of an experiment, nurses and patients were all watching closely for any unfavorable symptoms that could be traced to the more liberal diet. And neither by myself or by any one connected with the cases, could harmful results be detected.

The patients rested comfortably, slept well, and temperatures seemed to lessen with the nourishing diet. This confirmed my experience in 1913 and 1914. There was four relapses in this year's series, only one of which was severe, and it was undoubtedly due to undue and uncontrollable activity of the patient. This relapse was marked by a severe exacerbation of vomiting, accompanied by a sharp rise of temperature. At first I hoped it was due to a neurosis or a simple gastritis, but its persistency leads me to think she had a duodenal ulcer (Peyers patch).

I had no fatalities, no hemorrhage, in fact none of the severer symptoms characteristics of the typhoid state in this year's series.

Many availed themselves of prophylactic vaccination on account of this epidemic. The Missouri Pacific gave the employes free vaccination if they desired, and I gave one hundred thirty-five the treatment. In all, counting my private cases, I inoculated one hundred and eighty-nine.

The youngest one treated was eighteen months, next two years, three years, and so forth. In these children there was no reaction, either local or general. I gave them one-half of the standard dose. To old and young I administered three injections. In all cases that gave a history of malaria fever, continued fever or typhoid, there was pronounced reaction.

The worst reaction I had from vaccination, gave a history of four weeks malaria fever in 1905, the local reaction was alarming and the general reaction pronounced. The farther back the fever dated the less pronounced the general reaction. Two days usually gave entire freedom from unpleasant symptoms. I gave these injections to two who were in active gonorrhea without them showing any ill effects. To an old alcoholic and syphilitic that suffered from intense gastritis, vomiting after every meal, the treatment resulted in the cessation of his gastric symptoms. He declares himself cured of his stomach trouble.

There were three who took the prophylactic treatment that contracted the disease. These were taken down within two weeks. They had it no differently from the others in the series.

I saw no immediate anaphylatic symptoms in any case. There was no urticaria, no asthma, and I gave it to several pronounced asthmatics.

There was one interesting series, consisting of three sisters, one of the girls was said to be frail and would likely have to be cared for if she took the vaccine, so the other two waited to care for her before they took the treatment, and she had no more reaction than sterile water would make. The next one in point of resistance took hers and showed no reaction. Then the strongest and most robust took hers, and she had a violent reaction. She had never been in bed from sickness before. By careful questioning, I discovered that when there was typhoid fever in her home in 1911, she was complaining of malaise, lack of appetite and headache for several weeks, thus showing the cause of the reaction was from the immunity she had gained in this ambulatory attack.

In 1914, I used the curative vaccine to a relapsing case to bring about an active reaction. It was effectual in producing the reaction, for her temperature elevated after each injection. She made a satisfactory recovery in three weeks. I am not satisfied that she would have done so well without them.

In closing this paper, I will remark that prophylactic vaccination promises the greatest hope in controlling this widespread disease. The favorable reports from the army of the United States has given us more encouragement than any other. Their latest chapter is only one reported case of fever in the whole army from January 1, 1915, to July 1, 1915.

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### **Extrahepatic Bile Pigment Formation.**

Hooper and Whipple report some experiments upon the action of various tissues in the formation of bile pigment from hemoglobin. (Jour. Exper. Med., Jan.) It was shown that this change in hemoglobin was produced when it was introduced into the circulation of dogs from which the liver had been excluded. It has further been shown that hemoglobin can be changed to bile pigment in the pleural and peritoneal cavities. The experiments have simply shown that this function resides in other than hepatic cells but have not yet shown that the function is limited to any type of cell.

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### **Conference on Medical Education.**

The twelfth annual Conference on Medical Education, Public Health and Legislation will be held at the Congress Hotel, Chicago, Monday and Tuesday, February 7 and 8, 1916, under the auspices of the Council on Medical Education and the Council on Health and Public Instruction of the American Medical Association.

Monday, February 7, will be devoted to medical education, and Tuesday, February 8, to medical legislation and public health.

All state licensing boards, state boards of health, state medical societies, associations of universities and other organizations interested are invited to send representatives to this conference.

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# THE JOURNAL

of The

## Kansas Medical Society

W. E. McVEY, M.D. - - - - Editor

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### A New Service Department.

We have inaugurated a new department which we trust will be of much use to the readers of the JOURNAL. See advertising pages. It is the purpose of this department to answer all inquiries from our readers about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc.

Any inquiries of this kind which we are unable to answer will be referred to the office of the Cooperative Medical Advertising Bureau of Chicago, where catalogues and price lists of all kinds are kept on file. Your inquiries will receive prompt and careful attention, and if it is possible to secure the information you desire it will be furnished you.

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### The Optimism of the Profession.

Just why it is no one knows, but it is a fact that as a general class, doctors are the most optimistic people on the globe. It is not because the medical profession attracts only those of this type. Even the most

pessimistic medical student becomes decidedly optimistic in the later years of his professional life. No other people are so intimately cognizant of the whims of fate, which cuts off the most promising sprig of manhood, maims the most beautiful bud of womanhood, or disturbs the equilibrium of the most mighty intellect; which prolongs the agony of the hopelessly afflicted, adds sickness and suffering to poverty and desolation, or denies death to destitution, degradation and despair. Frequent or constant association with the greatest misfortunes of the world—conditions in which even Mark Tapley would find his chance to “come out strong”—tend only to increase the optimism of the doctor.

He is especially optimistic in his own affairs. He knows that Andy Bullem refused to pay his last doctor and sued him for malpractice when he tried to collect his bill, but he readily answers the emergency call to set Andy's broken leg, trusting that by some miracle a little grain of gratitude may fall from that anhydrous soul or that by some chance remark he may admit his recovery before the day of the inevitable suit for damages.

The crops fail, half his people can no longer pay, the banks tighten up on their loans, gasoline goes up, but the doctor goes on planning his post-graduate course so that he may give better services to the people who are unable to pay for the services already rendered, and he confidently hopes that some kind providence will supply him with the funds to buy gasoline for his car and drugs for his patients.

He works eighteen hours a day, drives thirty thousand miles a year, and receives an average scale of pay that a union plasterer would consider a joke, but he goes on trusting in the kindly future, promising himself that when he gets the time he will make a little money to live on so that he can cut out some of the hard work.

He is, if possible, more especially optimistic in regard to the affairs of his profession. No threats of dire disaster to his noble calling disturb his equilibrium. He hears the political wrangles over some leg-



islative measure which threatens to infringe the rights of his profession, with the same equanimity that he hears the hysterical outcries of Valeriana Smallweed. He secures the passage of laws to guarantee his own efficiency in the service he renders the people, then watches the inroads upon his legitimate business by incompetent, uneducated grafters, authorized by subsequent legislation, the prevention of which he trusted to the good sense of the people.

He reads with the utmost indifference the announcement of a widespread movement to establish, by legislative enactments in every state in the Union, a system of sickness insurance which will deprive him of his independence, his self respect, and the incentive to progressive improvement; which will curtail his income and increase his labor. The doctor views with unconcern a rapidly developing conditions of affairs which in any other business would terrify investors and stampede the stock market.

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### Publicity.

Doctors who are much addicted to the publicity habit are likely to be embarrassed at times on account of the careless preparation of their copy. Those who permit the newspaper men to prepare the material for their "interviews" are sometimes made to say some very ridiculous things.

The Topeka Capital, in its issue of December 12, described an incident in which a local physician, who had lost a diphtheria case from paralysis, wished to report this as the cause of death, but the health officer insisted upon diphtheria being given as the cause of death. This was all very proper, but the Topeka health officer is quoted as saying: "It makes no difference if the girl went out and got run over by a trolley car, you would have to say diphtheria killed her."

Much good may be accomplished in the prevention of disease by the proper kind of publicity. Some harm may be done. It is evident that the purpose of the publicity

propaganda is not being realized by the character of some of the articles appearing in the newspapers. However, some of the best newspapers are using the material sent out by the A.M.A. These articles are carefully written by men who are well posted in medicine and are able to prepare synopses that are interesting and intelligible to the average newspaper reader, and most of them are synopses of articles that have appeared in the Journal of the A.M.A.

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### The Intoxication in Intestinal Obstruction.

In the current number of the Journal of Experimental Medicine there appears the fifth of a series of papers dealing with the intoxication in intestinal obstruction. The first four of these papers reported the researches made by Whipple, Stone and Bernheim. The report which has just been published is by Whipple, Rodenbaugh and Kilgore.

In the investigations which were undertaken to determine the cause of the intoxication occurring in intestinal obstruction, it was found that the material which accumulated in the lumen of closed intestinal loops furnished a toxic substance with which an acute intoxication could be produced, which was similar and probably identical with that found in intestinal obstruction.

The possible essential factors in the production of this toxic substance have, by the process of elimination, been reduced to two—bacteria and the intestinal mucosa. It has also been shown that the intestinal mucosa is essential to the production of the toxin, and that without the presence of the mucosa no toxin is produced, but there are differences of opinion among the investigators as to the relative importance of bacteria.

It has also been shown that most of the intoxication is due to absorption from the mucous membrane alone, and not from the material in the lumen of the closed loop. While it is not yet possible to determine positively the chemical identity of the poisonous substance, it has been possible

to isolate a primary proteose which will produce the characteristic symptoms of the intoxication and which appears to be the only substance contained in the material accumulated in the closed intestinal loop that will produce such intoxication.

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### **Kansas Hospital Association.**

Fifteen representatives from as many Kansas hospitals met at Topeka December 30, 1915, and organized The Kansas Hospital Association. The following officers were elected for the ensuing year:

Dr. J. T. Axtell of Newton, president; Dr. S. Murdock, Jr., of Sabetha, Dr. F. W. Shelton of Independence, and J. C. Hall of McPherson, vice-presidents; Dr. W. R. Dillingham of Halstead, secretary-treasurer.

The purpose of the association is to promote efficiency and economy, and to that end will co-operate with the American Hospital Association. A copy of the constitution and by-laws, application blanks, and any information will be gladly sent to any hospital in the state by the secretary.

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### **Endowment of \$500,000 to American College of Surgeons.**

The American College of Surgeons begins the new year with an announcement that it has secured from its Fellows an endowment fund of \$500,000. This fund is to be held in perpetuity, the income only to be used to advance the purposes of the college by this means lasting progress toward the purposes of the college is assured.

The college, which is not a teaching institution but rather a society or a college in the original sense, now lists about 3,400 Fellows in Canada and in the United States. Without precedent for swiftness of development it stands today a powerful factor both in the art and in the economics of surgery.

Primarily the college is concerned with the training of surgeons. But the significant fact in connection with the endowment just secured is that it has come from

the surgeons themselves, inspired by a motive for better service to the patient. Ideals in the profession of medicine are living things. Probably no more convincing proof of this fact exists than the sacrifice which the surgeons of this continent have made willingly in order to raise this fund.

To begin with, these ideals are to find concrete expression along the following lines of activity:

1. Since the whole problem of the training of specialists for the practice of surgery is the primary purpose of the college, the regents propose at an early date to present a clear conception of the college to the undergraduate medical students of this continent. The regents, further, will ask each senior student of this group who has in mind to specialize in general surgery or any branch of surgery to register with the college. As these students, then, serve later as internes and as surgical assistants, they will be requested to report these facts to the college. The college, in turn, will systematically seek information as to the ability and character of such men; and the information thus obtained becomes the basis of admission to fellowship in the college. In addition to this procedure, the regents will insist upon the proper keeping of case histories, and they will endeavor to stimulate in these men in training right ideals of medical practice. In this program they ask the active co-operation of the faculties of the medical schools and of all practitioners of medicine.

2. Inasmuch as proper training in surgery is inseparably involved with the conduct and efficiency of hospitals, the college will seek accurate data on all matters which relate to hospitals. From time to time it will publish studies upon hospital problems, the purpose being always to be helpful to the hospitals. These publications, further, will inform recent medical graduates as to where they may seek adequate general or special training in surgery. To be concrete the college will deal with such problems as (a) the proper



equipment for medical diagnosis, e. g., well equipped laboratories for chemical, pathological, and X-ray work; (b) the proper forms for case histories and the facilities for keeping these records; (c) the management and the curricula of the nurses' training schools; (d) the specialization essential in any well organized hospital.

3. The college will ask the faculties of medical schools to consider the advisability of conferring a supplementary degree of proficiency in general surgery and in the various specialties of surgery.

4. The college will issue readable monographs, educational in nature, to the press, to the general public, to hospital trustees, and to the profession of medicine upon subjects of medical procedure and the whole meaning of fitness to practice surgery.

The entire impetus of the college springs from within its own membership. Necessarily that impetus implies reform. But there is a vast difference between reform preached at men and reform innate in the hearts of men which finds expression at their own initiative. Whatever impetus the college possesses, it originates among the surgeons themselves. It is not an extraneous force or an "uplift" movement. But rather, out of the widely divergent views on many subjects among the fellows, the aims of the college rise as those time-tried aspirations which are inherently the basis of all that is valuable in the vocation of surgery. The purposes of the college are concerned directly with matters of character and of training, with the betterment of hospitals and of the teaching facilities of medical schools, with laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent service; in a word, they embody those ideals which have stood the test of centuries. Upon these the fellows are united. These are the ideals which each fellow, single-handed, has endeavored to foster, and the expression of them today through the college comes as a sort of mass-consciousness of the whole body of fellows. The splendid

fact is that the fellows have grasped in an instant the meaning of the college by a process of fusion and have gladly made sacrifices for its success.

As one comes into wide acquaintance with the fellows of the college and catches some fair notion of their earnestness, he sees the future of the organization not by means of logic. There is something more subtle and potent than argument. A determined optimism carries a momentum of its own. Without a logical process it seeks concrete expression; and, more than this, it really recreates circumstances through all shifts of weather or play of incident with a certainty not excelled by an utterly rational course. The fellows of the college, in their widely scattered districts, fuse their consciousness of the organization with a splendid hope in their hearts to advance all that is important and valuable in the profession. This very attitude of mind is the first promise for the future of the college. It is a promise that admits of no defeat. It is a pledge of loyalty to medical patriotism which means loyalty to the public welfare exercised through intellectual sincerity and scientific accuracy. It means a safeguard to the public, for it indicates where honest and adequate surgery may be found.

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## SOCIETY NOTES.

### JACKSON COUNTY SOCIETY.

The Jackson County Medical Society met at the City hall in Holton, Wednesday, December 29, at 2 p. m. The program consisted of case talks and other topics of a general nature, and the election of officers for the ensuing year. C. M. SEVEIR,  
Secretary.

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### THE GOLDEN BELT SOCIETY.

The Golden Belt Medical Society held its regular quarterly meeting at Manhattan on Thursday, January 6. The program arranged was as follows:

Afternoon session, 3 p. m., Commercial Club rooms; "The Pathology of the Pelvic Sling and Its Correction," Dr. W. S. Yates,



Junction City; "Some Experiences in War Hospital in France," Dr. W. S. Sutton, Kansas City, Mo.; dinner Gillette hotel. Evening session, paper, Dr. C. Woodson, St. Joseph, Mo.; "Indications for Blood Transfusion," Dr. W. M. Mills, Topeka, Kan.

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MORRIS COUNTY SOCIETY.

The Morris County Society met in Dr. Smith's office in Council Grove at 7:30 on the evening of December 13. The following program was prepared:

"Toxemia of Pregnancy With Review of Cases," by Dr. G. E. Brethour, Dwight

"Some Reminiscences of a Quarter of a Century in the Practice of Medicine," by Dr. W. H. H. Smith, Council Grove.

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WILSON COUNTY SOCIETY.

The Wilson County Medical Society met at the high school building in Fredonia at 7:30 p. m. November 30. This was the first meeting we have had since May, our other dates having been postponed on account of the extremely wet weather.

No papers had been prepared for this meeting, election of officers being first on the program. Dr. W. H. Young of Fredonia was elected president; Dr. L. S. Somers of Altoona, vice-president; Dr. E. C. Duncan of Fredonia, secretary and treasurer, for the tenth consecutive year. Dr. Young of Fredonia was appointed to read a paper before the State Society in May, and was also elected delegate for 1916.

Dr. R. K. Dodge of Fall River applied for membership to our Society. While he resides in Greenwood County, there is no county society there. Our secretary had some previous correspondence with the state secretary regarding this matter, and we accepted Dr. Dodge for membership.

Dr. A. W. Fairchild, also of Fall River, made application, as well as his wife, Dr. Statella Fairchild. The applications were referred to the board of censors. Dr. Statella Fairchild stated that she is already a member of the Kansas Medical Society, 1915 and 1916.

A banquet was next served by the

domestic science class of the high school, after which informal talks were made on different subjects.

A case of sarconia was reported by Dr. Duncan, which had been diagnosed by the X-ray two months after the initial symptoms had made their appearance. It was removed, and the patient is now receiving X-rays twice weekly and sodium cacodylate.

Dr. Addington of Altoona and Dr. Flack of Fredonia reported a case of tetanus. A child about three years old was kicked by a horse, only a very slight scalp wound ensuing. A decompression operation was done and the case progressed nicely for eight or nine days, the child being up and around. Tetanus developed suddenly and the child died fifteen or twenty hours later. No antitetanic serum had been used, as tetanus is very rare in this part of the country.

The following members of the Society were present: Drs. Moorehead and Randall of Neodesha, Drs. Somers and Addington of Altoona, Dr. Riley of Benedict, and Drs. Thomas, Young, Wiley, Flack and Duncan of Fredonia.

Very truly,  
E. C. DUNCAN, Secretary.

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COFFEY COUNTY SOCIETY.

The Coffey County Medical Society held its first regular meeting at the National Hotel in Burlington on the evening of November 5. After a five-course banquet, the regular business of the Society was transacted. The following officers were elected: President, Dr. J. C. Fear, Waverley; vice-president, M. L. Stockton, Gridley; treasurer, G. R. Norris, Burlington; secretary, C. C. Culver, Burlington. Censors: J. R. Crawford of LeRoy, F. C. Boggs of Waverley, and Jerry Farner of Strawn, for one, two and three years, respectively. There are thirteen members at present and several prospects. Dentists are asked to join as honorary members. The Society meets every three months, and the next meeting will be held at Burlington on February 5.

C. C. CULVER, Secretary.

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## MARION COUNTY SOCIETY.

The Marion County Society held its annual meeting at Marion on Wednesday evening, December 15. Dr. H. W. Davis read a paper on "Official vs. Proprietary Drugs" which was generally discussed. Dr. W. E. Currie of Sterling was present and gave a short talk, explaining the "Defense Fund." Most all of the members were present. The following officers were elected for the year 1916: President, Dr. G. J. Goodsheller; vice-president, Dr. R. C. Smith, Marion; secretary and treasurer, Dr. Benton T. Prather, Peabody. Meetings will be held on the second Wednesday of each month.

BENTON T. PRATHER,  
Secretary.

## CRAWFORD COUNTY SOCIETY.

At the November meeting a resolution was passed instructing the secretary to write every ethical physician in the county explaining the Medical Defense Fund, and soliciting membership of all physicians in the county.

The December meeting was held in Pittsburg Tuesday evening the 7th. A banquet was served by the Ladies' Aid Society of the Methodist church at 6 o'clock, after which the house was called to order in the rooms of the Chamber of Commerce.

After the reading of the minutes of the previous meeting, the secretary's report was read, showing an increase in membership from 24 to 37 over 1914.

The following were elected as officers for 1916:

Dr. William Williams, Pittsburg, president.

Dr. R. W. Moore, Arcadia, vice-president.

Dr. C. Mart Montee, Pittsburg, secretary and treasurer.

Dr. O. B. Kiehl, Pittsburg, board of censors.

All other business was suspended, the floor being given to Dr. C. C. Conover of Kansas City, Mo., for the conducting of a clinic.

The following cases were presented and

discussed by Dr. Conover: Mitral regurgitation and stenosis, with chronic dilatation and hypertrophy, following infective arthritis of 19 years' standing.

Case 2. A double mitral lesion, with dilation and secondary enlargement of the liver, associated with chorea, of six months duration.

Case 3. Aneurism of the aortic arch, involving the left subclavian artery, with extensive dilation and hypertrophy, duration 4 years. Probably luetic in origin.

Case 4. Stenosis of oesophagus, "cardiac end," following accidental taking of lye 15 years previous.

Case 5. Nerve and arterial lues, with optic atrophy chronic cardiac dilatation, with relative mitral insufficiency.

Case 6. Cholecystitis with a probable cholelithiasis and a co-incident malarial "tertian" infection.

Dr. Conover showed lantern slides to emphasize the pathology in each case.

The presentation of the cases was extremely interesting and practical, each point being presented in a clear and concise manner.

The Society tendered a vote of thanks to Dr. Conover in appreciation of his interest and efforts in presenting the cases for discussion.

WM. V. HARTMAN,  
Secretary.

## CHEROKEE COUNTY SOCIETY.

The regular monthly meeting of the Cherokee County Society was held in the office of Dr. H. H. Brookhart at Columbus on December 8. The following officers were elected for the year 1916: President, Chas. T. Reid, Mineral; vice-president, A. A. Shelley, Galena; secretary and treasurer, F. L. McKinney, Galena. Board of Censors: R. C. Lowdermilk, Galena; S. W. Baxter and Chas. H. Huffman, Columbus. F. L. MCKINLEY, Secretary.

## DOUGLAS COUNTY SOCIETY.

The Douglas County Society met in the Y. M. C. A. rooms at Lawrence on December 14. After discussion of the report of the previous meeting the following motions

were introduced and passed by a vote of the members present:

Moved by M. T. Sudler, M.D., That this Society rescind the action taken at the last meeting November 9, 1915, and expunge the same from its records, and that the secretary be instructed to ask the State Journal not to print the same. Carried.

By M. T. Sudler, M.D. I move that the committee on health of the University of Kansas be requested to present their plans, records and practice in regard to conserving the health of the students to the counselors of the State Society, who will be asked to visit Lawrence and investigate this practice, and that they will also meet with such members of the Douglas County Medical Society as may wish to consult them, and that they will recommend such measures as will conserve the intention of the committee to conserve the ethics, dignity and fairness toward all members of the Douglas County Medical Society. Motion carried.

On motion of M. T. Sudler, the president was requested to call a special meeting of the Douglas County Medical Society to meet the counselors of the State Society.

#### SHAWNEE COUNTY SOCIETY.

The Shawnee County Society met in the Commercial Club rooms Monday evening, January 3. There was an unusually large attendance to greet the new president, Dr. T. C. Biddle.

The evening was devoted to the general discussion of several topics of immediate interest to the profession. "Industrial Insurance" was the first subject on the program, and speeches were made by Drs. McVey, Davis and Kaster. Few of those present had noted the announcement in the journals of the proposed legislation along this line, and were not inclined to view with seriousness the probability of a national system of sickness insurance. However, a committee consisting of Drs. Lindsay and Menninger was appointed to confer with the Legislative Committee of the State Society.

The next subject for discussion was

"Public Health, Topeka in Particular." On this topic addresses were made by Drs. Warriner, Jeffrey, McDonough and others. The discussion had a tendency to disparage the efforts of the present city health officer to completely fill the position he occupies. A resolution requesting the commissioners to appoint a competent and ethical physician to fill the position was, after thoughtful deliberation, voted down.

The last subject was "Central Laboratory and Scientific Work in Topeka." This topic was discussed by Drs. Conner, Munn, McGuire, Porter, Davis and others. It was impossible to determine from the discussion just what the main idea was, but there seemed to be a concensus of opinion that it would be desirable for some arrangement to be made by which the fees for ordinary laboratory work could be reduced.

The following were appointed as a committee on arrangements for the meeting of the State Society in May: Drs. McVey, Jeffrey, Loveland, M. Lindsay, Davis.

#### WYANDOTTE COUNTY.

The Wyandotte County Society held its regular meeting at the Mercantile Club rooms Tuesday evening, January 4. The program of the evening consisted of reports of clinical cases by Drs. McDougal, Barney and Lidikay.

At the annual meeting the following officers were elected for 1916: President, C. C. Nesselrode; vice-president, W. J. Pearson; secretary, E. A. Reeves; treasurer, Thos. Richmond; Censors: W. F. Fairbanks, E. D. Williams, T. S. Bourke.

W. St. C. Symmers (London Lancet) reports some experiments with urea as a bactericide. It is permanently stable in the dry state, is non-poisonous, is highly diffusable. In eight or ten per cent solution it inhibits the growth of bacteria and in higher percentages is bactericidal to nonsporing bacteria.



## PUBLIC HEALTH NOTES

### From the State Board of Health.

To the Editor of the JOURNAL:

The number of morbidity reports received by the Division of Communicable Diseases in 1914 was 13,917, in 1915 over 21,000 (exact figure not available as yet). To those who may require it, we hasten to explain that as a matter of fact, there was an actual decrease in the prevalence of disease in the latter year, and these figures only indicate to us a result very gratifying, viz., that the physicians of Kansas are exhibiting a marked increase of interest in matters of public health, and are increasing their efforts to give us better reports. It is for this reason that we have requested a little space in the JOURNAL for the purpose of expressing our sincere appreciation of these efforts, and to thank the medical profession of the state for the splendid co-operation we have received in the past year.

There are still some few who regard us as somewhat fanatical on the question of gathering morbidity reports. It seems unnecessary to explain the necessity of prompt and complete reports of cases of communicable disease, but a word of explanation of requirements may not be amiss.

Prior to 1914, cases of contagious disease were reported to local health officers. At the end of each month, these health officers sent a compilation of the number of reports received by them to this department. In some cases health officers withheld this summary two or three months. It may readily be seen that in the interval of a month many epidemics gained great headway without the knowledge of this department. A compilation of reports one to two months old was very musty and ancient history, and interested no one.

In January, 1914, the new morbidity report regulation was adopted. This is the Model Morbidity Report Regulation adopted by the Association of State and Provincial Boards of Health of North America. Under it there is now required

to be reported 35 infectious diseases, 12 occupational diseases, 2 venereal diseases, and 2 diseases of unknown origin. Special provisions and blanks are made for reporting occupational and venereal diseases direct to the State Board of Health. All other diseases are to be reported to the local county or city health officer. Uniform cards are furnished by the State Board and distributed to physicians through health officers. Successful efforts in most counties have been made to have county furnish postage for these cards. As soon as the physician suspects a disease to be of a communicable nature he should send card report to the health officer. In some cities it has been customary to telephone this report. While in the large majority of cases this plan is satisfactory and permits of prompt action in quarantine, yet many errors and disputes arise, and it is always safer, and a matter of protection to all parties, if a written card report is made by the physician to follow the telephone report. At the end of each week all cards received by the local health officer are forwarded to this department, so that we are enabled not only to keep in weekly touch with the prevalence of disease, but we have full information regarding each individual case. The value of this information for statistical study depends upon the carefulness of the physician, a fact to be kept in mind. Its value for the control and prevention of disease depends upon the efficiency of the health office, and the efficiency of the health office is in direct proportion to the demands and education of the public. While a physician is not entirely responsible for the amount of public health sentiment in his locality, yet he cannot shirk his share of a duty in which the public looks to him for leadership, and certainly no physician can afford to sacrifice his prestige by being a lagger instead of a leader.

No fire department is a success without a proper alarm system. To put out fires it is first necessary to know where fires exist. The same is true of a morbidity report system and contagious disease. (It is

rather a sad commentary on our civilization that we are ready to spend more on fire departments than our health departments, and illustrates to some degree the comparative values of property and of human health and life). A dozen persons, without knowledge of each other, may each see a small blaze and each extinguish it with a bucket of water. Each may feel he has done his full duty, but he has not until he reports the blaze and his action to the fire chief. An efficient chief would at once scent incendiarism and seek to discover the author of all these fires, so that a wholesale conflagration might be avoided. So a dozen physicians may each feel he is performing his full duty when, on discovery of a case of typhoid fever, he institutes individual preventive measures. Yet a dozen reports of typhoid fever in any locality means to a health department some common source, and calls for immediate investigation and measures of prevention.

Many physicians plead rush of business as an excuse for delinquencies. It is rather ironical that the men with the largest practices in the state are most prompt in making reports. There are 3,050 practitioners in Kansas. Twenty-one thousand reports means an average of seven reports per year for each, or one report every seven weeks. As a matter of fact, these reports were made by not more than 1,500 physicians, but even at that the amount of work on each is not burdensome. Some argue that physicians should be paid for making reports. From a matter of principle they may be right, but one state which allows 25 cents for each report finds the fee absolutely no incentive. Can any one plead that this sum—a porter's tip—is more highly regarded than the sense of public duty in the mind of any physician in Kansas? If so, may the Lord pity the sordidness of that mind, and this department rejoices that there are so few of that kind of doctors that we can't even remember one of them.

Newspapers sometimes feel the need of sensationalism in headlines. Hence the department is often misquoted, and their

motives misinterpreted, by articles from time to time, in which appear threats of prosecution of delinquent physicians. May we hope that the medical profession of Kansas will not be misled by such articles into a spirit of antagonism against the department? We are headquarters—physicians are sentinel outposts. There must exist between us a mutual understanding and sense of loyalty to each other. The Kansas Board of Health is made up of Kansas men, who strive to maintain the Kansas perspective. Its success so far has rested upon the shoulders of Kansas physicians. Prevention and the control of disease is the coming demand on the part of the public.

Not because laws require us to do so, but because the ethics of the profession and the spirit of medicine demand it, we promise our co-operation and solicit that of the Kansas medical profession during the coming year, in meeting this demand.

JOHN J. SIPPEY, M.D.,  
Epidemiologist.

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### **Public Health Service Discovers Cause and Cure of Pellagra—Pellagra Caused by Insufficient Proteid Diet.**

Announcement was made at the Treasury Department today that as a result of continued research and experiments of the Public Health Service, both the cause and the cure of pellagra have been discovered, and that the spread of this dread malady, which has been increasing in the United States at a terrific rate during the past few years, may now be checked and eventually eradicated. Assistant Secretary Newton, in charge of the Public Health Service, expressed great interest in the discovery and regards it as one of the most important achievements of medical science in recent years.

Pellagra has been increasing alarmingly throughout the United States during the last eight years, and it is estimated that 75,000 cases of the disease will have occurred in the United States in 1915, and of



this number at least 7,500 will have died before the end of the year. In many sections only tuberculosis and pneumonia exceed it as a cause of death.

The final epoch-making experiment of the Public Health Service was carried out at the farm of the Mississippi state penitentiary about eight miles east of Jackson, Miss., and together with the previous work of the Service completes the chain in the prevention and cure of the disease. The work at the Mississippi farm has been in charge of Surgeon Joseph Goldberger and Assistant Surgeon G. A. Wheeler of the United States Public Health Service. The farm consists of 3,200 acres in the center of which is the convict camp. The final experiment was undertaken for the purpose of testing the possibility of producing pellagra in healthy human white adult males by a restricted, one-sided, mainly carbo-hydrate (cereal) diet. Of eleven convicts who volunteered for this experiment, six developed a typical dermatitis and mild nervous gastro-intestinal symptoms.

Experts, including Dr. E. H. Galloway, the secretary of the Mississippi State Board of Health, Dr. Nolan Stewart, formerly superintendent of the Mississippi State Hospital for the Insane at Jackson, Dr. Marcus Hause, professor of dermatology, Medical College of the University of Tennessee, Memphis, Tenn., and Dr. Martin R. Engman, professor of Dermatology in the Washington Medical School, St. Louis, Mo., declare that the disease which was produced was true pellagra.

Prior to the commencement of these experiments, no history could be found of the occurrence of pellagra on the penitentiary farm. On this farm are 75 or 80 convicts. Governor Earl Brewer offered to pardon twelve of the convicts who would volunteer for the experiment. They were assured that they would receive proper care throughout the experiment, and treatment should it be necessary. The diet given was bountiful and more than sufficient to sustain life. It differed from that given the other convicts merely in the absence of

meats, milk, eggs, beans, peas, and similar proteid foods. In every other particular the convicts selected for the experiment were treated exactly as were the remaining convicts. They had the same routine work and discipline, the same periods of recreation and the same water to drink. Their quarters were better than those of the other convicts. The diet given them consisted of biscuits, fried mush, grits and brown gravy, syrup, corn bread, cabbage, sweet potatoes, rice, collards and coffee with sugar. All components of the dietary were of the best quality and were properly cooked. As a preliminary, and to determine if the convicts were afflicted with any other disease, they were kept under observation from February 4 to April 9, two and a half months, on which date the one sided diet was begun.

Although the occurrence of nervous symptoms and gastro-intestinal disturbances was noted early, it was not until September 12, or about five months after the beginning of the restricted diet, that the skin symptoms so characteristic of pellagra began to develop. These symptoms are considered as typical, every precaution being taken to make sure that they were not caused by any other disease. The convicts upon whom the experiment was being made, as well as twenty other convicts who were selected as controls, were kept under continuous medical surveillance. No cases of pellagra developed in camp excepting among those men who were on the restricted diet. The experimenters have therefore drawn the conclusion that pellagra has been caused in at least six of the eleven volunteers as a result of the one sided diet on which they subsisted.

On the basis of this discovery, the states of Mississippi, Louisiana and Florida have laid their propaganda through their respective boards of health for the eradication of the disease.

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#### **Summary of the Annual Report of the Surgeon General of the United States Public Health Service.**

The annual report of the Surgeon Gen-



eral of the United States Public Health Service records the largest amount of work performed in the history of that organization. Since the passage of the law of 1912 the public health functions of the Service have materially broadened, thereby increasing greatly its usefulness to the American people. Throughout the report the economic importance of disease prevention is made apparent to the reader.

Perhaps the most important achievement of the year was the discovery that pellagra is a deprivation disease, resulting from a faulty diet containing an excess of carbohydrates. While the final experiments which led to this discovery have only recently been completed, the conclusion itself is the culmination of investigations extending over a period of seven years. The work has consisted of epidemiological field studies, actual feeding experiments conducted at numerous places in Georgia and Mississippi, and experimental research at Spartanburg, South Carolina, and other places.

A new national quarantine station was opened at Galveston, Texas, and the control of the Boston station was transferred to the Public Health Service. A great reduction in immigration has been observed during the year, with a corresponding increase in the number of aliens certified. At the port of New York, the percentage has risen from 2.29, previous to the development of the European conflict, to 5.37 since that time; this increase largely being due to the fact that with the decreased immigration more time can be devoted to the examination. The number of cases treated at marine hospitals and relief stations exceeded 55,000, 15,000 of which were hospital patients, a considerable increase over previous years. The coast guard cutter "Androscoggin" was fitted out as a hospital ship and now affords relief to deep sea fishermen on the banks of Newfoundland.

On the occurrence of plague at New Orleans, the first outbreak upon the Gulf seaboard, the state and local health authorities requested the Public Health Serv-

ice to take charge of the situation. Extensive rat-proofing and other anti-plague measures were undertaken, resulting in the eradication of the disease from among human beings, and the practical extermination of the rodent infection.

Great reduction in the incidence of malaria was obtained in localities where surveys were conducted. Drainage projects, rice culture studies and the conditions surrounding the impounding of water for power purposes were investigated in order to eradicate as far as possible the disease in these areas. Scientific investigations of malarial infection showed that in the latitude of this country the most important agent in carrying the infection through the winter season is man, and not the infected, hibernating, *Anopheles* mosquitoes as was previously supposed. From the standpoint of prevention this is a discovery of considerable value.

Studies of occupational diseases and industrial hygiene were instituted at several places during the year. A survey of the industries of Cincinnati was made to determine the cause of the prevalence of tuberculosis among industrial workers. The investigations relating to the migration of persons suffering from tuberculosis were completed.

Upon the request of the health authorities of five states, the organization and operations of the respective boards of health were studied and recommendations advanced for improvement in the powers and duties of these bodies. The health organizations of several cities were likewise investigated.

Investigations of the pollution of streams and the examination of shellfish were also conducted.

Trachoma was combatted in the Appalachian Mountains, where it is most prevalent, over 12,000 cases being treated. Surveys in certain states during the year showed that the disease is not an uncommon infection.

Rural sanitation work was conducted in six different states and everywhere resulted in the reduction of typhoid and other com-

municable diseases.

Public health laboratories for the prevention of the interstate spread of disease were established at Chicago, Seattle and numerous other railway centers.

Additional duties have been imposed upon the Service by extension of relief benefits to the newly organized coast guard and the physical examination of seamen applying for the rating of "able seaman." For this reason, and because of the greatly increased health functions of the Service, an increase in the commissioned personnel is recommended. An additional building for the hygienic laboratory and the establishment of a national leprosarium for the proper segregation and care of cases of leprosy are also recommended.

### **Public Health Report of the Secretary of the Treasury.**

The annual report of the Secretary of the Treasury as it relates to the Public Health Service, contains numerous recommendations bearing on the functions of that organization, and evidences the great interest of this department in the extension and expansion of the governmental agencies for the protection of the public health.

In the development of general public health work, according to the secretary, there is great need of additional medical officers. The number of requests for advice and assistance in health problems received from states and municipalities during the past year has far exceeded that in any similar period in the history of the service, but the limited number of officers available for the work has prevented, in many instances, compliance with these requests.

The field investigations, the secretary states, have served as a stimulus to state and local health agencies, and every effort should therefore be made to encourage and turn to practical account the interest in health matters awakened in the general public. For this reason an increase in the appropriation for field work is requested.

An additional building for the hygienic

laboratory is urgently needed. The work of this institution has been greatly extended, particularly as it relates to the examination of viruses, serums and analogous products, a vast market for which has been recently created abroad. The safeguarding of these therapeutic agents requires great accuracy and precision and overcrowding is a serious handicap. In order that the public health may be better protected, an annual appropriation of \$25,000 is recommended to be expended in carrying out the provisions of the law relating to the examination of these products.

The United States is the only government of importance which does not provide for the care and isolation of lepers. The establishment of a national leprosarium where the numerous lepers, most of whom are native born Americans, may be properly segregated and treated, thereby eliminating a menace to the health of others, is urged.

The further recommendations of the secretary relate to the need of additional clerical assistance in order to meet the demands which are increasingly made on the Public Health Bureau.

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## **BOOKS.**

### **The Medical Clinics of Chicago.**

The Medical Clinics of Chicago, Volume I, Number III (November, 1915). Octavo of 200 pages, 23 illustrations. Philadelphia and London. W. B. Saunders Company, 1915. Price per year, paper, \$8.00; cloth, \$12.00.

Number 5 of the Medical Clinics has been received. It contains some very interesting and instructive discussions. The articles on Treatment of Typhoid Fever, on Neuritis, and on Hysteria, are especially interesting and of great practical value.

Clinics have taken the place of didactic lectures, to a very large extent, in medical schools, and at the present time no one questions the superior advantages of clinical instruction. While the printed report of a clinic lacks some features essential to the proper instruction of a student, practitioners are sufficiently familiar with the conditions to properly interpret their de-



scription without seeing the cases. The present popularity of clinical reports is only a sequence of the general adoption of clinical methods of teaching.

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The Clinics of John B. Murphy at Mercy Hospital, Chicago.

Vol. IV, Number 6, December, 1915. Published bi-monthly by W. B. Saunders Company, Philadelphia and London. Price per year, \$8.00.

We have just received the December number of the Murphy Clinics. This issue contains a larger number and a greater variety of clinics than usual. There are three clinics on papilloma, one on congenital nasal deformity, a case of carcinoma of the maxillary antrum and a case of congenital sinus of the neck. Then there are two clinics on osteosarcoma, one of the scapula and one of the humerus. Several clinics are reported showing the treatment of various deformities and contractions resulting from fractures, burns, etc. There are four clinics on luxations of the hip with descriptions of the operative procedures, and there are also several clinics on cases of recent fracture.

This number of the Clinics also contains the complete index for the volume.

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## THERAPEUTIC NOTES

### Of Interest to Journal Readers.

W. B. Saunders Company, publishers of Philadelphia and London, have just issued their 1916 eighty-four page illustrated catalogue. As great care has evidently been taken in its production as in the manufacture of their books. It is a descriptive catalogue in the truest sense, telling you just what you will find in their books and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 300 titles, including 45 new books and new editions not in former issues.

A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

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### Poisonous Fly Papers.

A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenical poisoning of children from accidentally consuming the contents of fly destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.

From the summer of 1915 we have been able to secure the reports of the following cases:

Month.	No.	Fatal	Recovery Indicated	Recovery Doubtful
May .....	1	1	.....	.....
June .....	2	.....	.....	2
July .....	5	2	2	1
August ....	14	5	8	1
.....	—	—	—	—
Totals. ....	22	8	10	4

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma, 1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring, was attributed to the fact. The cases reported were of children ranging in age from 1 to 6 years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We repeat, arsenical fly destroying devices are dangerous and should be abol-



ished. Health officials should become aroused to prevent further loss of life from their source.

Our Michigan legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and enforced in every state in the Union.—From the Journal of the Michigan State Medical Society.

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### **Agar in Chronic Constipation.**

As is perhaps generally known to physicians, Agar (sometimes designated Agar-agar) is a Japanese gelatin derived from seaweed. This substance has the natural property of absorbing water readily, and retaining it. It resists the action of intestinal bacteria, as well as that of the enzymes. Its use in the treatment of chronic constipation is based upon the fact that when ingested it passes practically unaltered into the intestine, where it adds to the bulk of the feces and thereby stimulates peristalsis; also it softens hard and dry fecal masses, thus favoring normal evacuation.

Parke, Davis & Co. supply a superior quality of Agar in granular form, which is very convenient for use and free from the somewhat unpalatable character of the ordinary commercial product. It is marketed in pound and quarter-pound cartons.

One or two heaping tablespoonfuls, according to individual requirements, taken morning or evening, at meal-time, with milk or cream or mixed with a cereal food, usually produce the desired result.

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### **Powerful Antiseptic and Disinfectant.**

A solution of Germicidal Soap (McClintock) containing 1:5000 mercuric iodide, the active ingredient, destroys common pus-producing organisms in less than five minutes. Prof. F. G. Novy, of the University of Michigan, is authority for the statement. He adds that solutions of mercuric chloride 1:1000 require more than fifteen minutes to accomplish the same result.

Germicidal Soap (McClintock) is at once a sterilizer, cleanser and lubricant. It is useful for sterilizing hands, instruments, and sites of operation; for lubricating sounds, specula, etc. It is excellent for vaginal douching, as it tends to dissolve pus, blood and mucus, whereas most other germicides coagulate them. It serves well as a disinfectant wash after attendance upon cases of communicable disease; in certain surface lesions associated with fetid discharge; in skin affections of parasitic origin. It is efficacious as a deodorant in offensive hyperhidrosis. In short, whenever and wherever a powerful disinfectant and detergent is required, this soap would seem to be indicated.

Germicidal Soap (McClintock) is supplied in two strengths, containing, respectively, one per cent and two per cent of mercuric iodide. The stronger soap (two per cent) in large and small cakes, in collapsible tubes (a soft soap), and in cylindrical sticks (for surgical use). Parke, Davis & Co. are the manufacturers.

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Professional interest on the part of physicians has led the Battle Creek Sanitarium to prepare a special volume for members of the medical profession describing, in a technical way, the Battle Creek Sanitarium System.

This book, for free distribution among physicians, gives a complete history of the origin of the sanitarium movement, a review of its progress during the half-century of its history and a detailed account of the methods of treatment, diet and exercise developed and used in the sanitarium.

The sanitarium enjoys the friendship and confidence of the profession to a marked degree, its records showing that two thousand physicians and five thousand members of physicians' families have availed themselves of the health opportunities offered at Battle Creek.

More than ten thousand patients have gone to the sanitarium through the advice of their family physicians.

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### New and Nonofficial Remedies.

During November the following articles have been accepted by the Council of Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Antiseptic Supply Co.: Iodoapplicators; Iodoapplicators, Special; Iodosticks.

The Bayer Company, Inc.: Iodothyryne Tablets, 3 grs.; Theocin-Sodium-Acetate Tablets, 1½ grs.; Thyresol Pearls, 5 grs.

Merck & Co.: Agar-Agar Powder, Merck; Agar-Agar Shreds, Merck; Berberine Hydrochloride, Merck; Calcium Peroxide, Merck; Ethyl Salicylate, Merck; Fluorescein, Merck; Formic Acid, Merck; Mercury Cyanide, Merck; Mercury and Potassium Iodide, Merck; Mercury Succinimide, Merck; Morphin Meeconate, Merck; Osmic Acid, Merck; Sodium Oleate, Merck; Sodium Peroxide, Merck; Thiosinamine, Merck; Urea, Merck; Zinc Peroxide, Merck.

H. K. Mulford Co.: Ampuls Emetine Hydrochloride, 0.005 Gm.; Ampuls Emetine Hydrochloride, 0.02 Gm.; Ampuls Emetine Hydrochloride, 0.04 Gm.; Ampuls Mercury Succinimide, 0.1 Gm.; Ampuls Pituitary Extract, ½ Cc.; Ampuls Quinine Dihydrochloride, 0.24 Gm.; Ampuls Quinine Dihydrochloride, 0.5 Gm.; Ampuls Quinine and Urea Hydrochloride, 1%; Ampuls Sodium Cacodylate, 0.1 Gm.; Ampuls Sodium Cacodylate, 0.2 Gm.; Ampuls Sodium Cacodylate, 0.5 Gm.; Ampuls Sodium Cacodylate, 1 Gm.; Purified Tricresol, Mulford; Scarlatinal Strepto-Serobacterin (Therapeutic).

Powers - Weightman - Rosengarten Co.: Calcium Peroxide, P.W.R.; Magnesium Peroxide, P.W.R.; Sodium Perborate, P.W.R.; Sodium Peroxide, P.W.R.; Strontium Peroxide, P.W.R.; Zinc Peroxide, P.W.R.

Swans-Myers Co.: Swan's Staphylococcus Bacterin (No. 37); Swan's Streptococcus Bacterin (No. 43); Swan's Typhoid Bacterin (No. 44) (Prophylactic).

Yours truly,

W. A. PUCKNER, Secretary.

Council on Pharmacy and Chemistry.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Bismuth Tribromphenate. — Basic bismuth tribromphenate. It is claimed to be a non-irritant and non-toxic antiseptic and an odorless and efficient substitute for iodoform. It is said to be of value in gastro-intestinal catarrh, proctitis, dysentery, diarrheas, etc. Merck & Co., New York (Jour. A.M.A., Nov. 13, 1915, p. 1731).

Butyl-Chloral Hydrate, Merck.—A non-proprietary brand of butylchloral hydrate admitted to New and Nonofficial Remedies. Merck & Co., New York (Jour. A.M.A., Nov. 13, 1915, p. 1731).

Ethyl Bromide, Merck.—A non-proprietary brand of ethyl bromide admitted to New and Nonofficial Remedies. Merck & Co., New York.

Homatropine Hydrochloride, Merck.—A non-proprietary brand of homatropine hydrochloride admitted to New and Nonofficial Remedies. Merck & Co., New York.

Sodium Cacodylate, Merck.—A non-proprietary brand of sodium cacodylate admitted to New and Nonofficial Remedies. Merck & Co., New York.

Iodothyryne Tablets, 3 grains. — Each tablet contains iodothyryne 3 grains. The Bayer Company, Inc., New York.

Thyresol Pearls, 5 grains.—Each pearl contains thyresol 5 grains. The Bayer Company, Inc., New York.

Theocin-Sodium Acetate Tablets 1½ grains.—Each tablet contains theocin-sodium acetate 0.1 Gm. The Bayer Company, Inc., New York.

Ampuls Emetine Hydrochloride, Mulford, ½ grain.—Each ampule contains emetine hydrochloride 0.005 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Emetine Hydrochloride, Mulford, ⅓ grain.—Each ampule contains emetine hydrochloride 0.02 Gm. H. K. Mulford Co., Philadelphia.



Ampuls Emetine Hydrochloride, Mulford,  $\frac{3}{8}$  grain.—Each ampule contains emetine hydrochloride 0.04 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Sodium Cacodylate, Mulford,  $1\frac{1}{2}$  grains.—Each ampule contains sodium cacodylate 0.1 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Sodium Cacodylate, Mulford, 3 grains.—Each ampule contains sodium cacodylate 0.2 Gm. H. K. Mulford Co., Philadelphia.

Ampuls Quinine and Urea Hydrochloride, 1%, Mulford.—Each ampule contains 5 Cc. of a sterile 1 per cent solution of quinine and urea hydrochloride. H. K. Mulford Co., Philadelphia.

Ampuls Mercury Succinimide, Mulford,  $\frac{1}{8}$  grain.—Each ampule contains mercury succinimide 0.01 Gm. H. K. Mulford Co., Philadelphia.

Calcium Peroxide, P.W.R.—A non-proprietary preparation of calcium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Magnesium Peroxide, P.W.R.—A non-proprietary preparation of magnesium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Peroxide, P.W.R.—A non-proprietary preparation of sodium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Strontium Peroxide, P.W.R.—A non-proprietary preparation of strontium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Zinc Peroxide, P.W.R.—A non-proprietary preparation of zinc peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Sodium Perborate, P.W.R.—A non-proprietary preparation of sodium perborate admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

Formic Acid, Merck.—A non-proprietary preparation of formic acid admitted to New and Nonofficial Remedies. Merck & Co., New York.

Swan's Typhoid Bacterin (No. 44) (Prophylactic).—Marketed in packages of three 1 Cc. vials and also in packages of six 1 Cc. vials. Swan-Myers Company, Indianapolis, Ind. (Jour. A.M.A., Nov. 27, 1915, p. 1915).

#### — I —

#### Effects of Arsenic.

The introduction by Ehrlich of synthetic compounds of arsenic as specific poisons for certain infectious organisms gave an impetus to progress in the pharmacologic investigation of arsenic. As an illustration may be mentioned the recent studies of Brown and Pearce of the suprarenotropic action of arsenic. Observations on more than sixty compounds, including such substances as arsenous acid, arsenic acid, sodium cacodylate, atoxyl, arsacetin, arsenophenyl-glycin, salvarsan and neosalvarsan, have shown that, without exception, toxic doses of all these arsenicals produce definite lesions of the suprarenals. The suprarenotropic action of all compounds of arsenic is not equally great or identical in character, but the lesions produced by a given compound in a given animal species are quite constant, and in some instances are the dominant pathologic manifestations of the toxic action of the compounds. The essential features of this action concern vascular changes in the suprarenal, alterations in the lipid content, cellular degeneration, and the effect on the chromaffin. Brown and Pearce note that the latter feature is of especial interest. Some compounds seem to exercise only slight influences on the chromaffin content of the suprarenals, while others, such as sodium cacodylate, salvarsan and neosalvarsan, cause a rapid and marked decrease in this substance. Whether or not the effect of therapeutic rather than toxic doses of arsenic compounds is exhibited in a definite stimulation of the suprarenal glands remains to be seen. Such a suprarenotropic action is, of course, strongly sug-



gested by these new findings.—The Journal of the American Medical Association.

—R—

### Endocarditis.

J. A. Oille, D. Graham and H. K. Detweiler, Toronto, Ont., (Journal A.M.A., Oct. 2, 1915), report the results obtained in the heart clinic at the Toronto General Hospital with the use of Rosenow's method of blood culture. They have found a non-hemolytic streptococcus, usually, though not always, producing green on blood agar in twenty-six cases of endocarditis investigated. The first twenty-three cases are especially noted as representing a class of very mild endocarditis cases, from which it is thought that positive blood cultures had not hitherto been obtained. The last three days are added for comparison as they conform to the variety, commonly called in the literature "subacute bacterial endocarditis." Only in a small percentage of suspected cases could these cultures be made, owing to the lack of time and depletion of the staff on account of the war. The case reports are given in detail in the paper after the discussion and their general conclusions are summed up as follows: 1. A streptococcus bacteriemia is present in the great majority of cases of active endocarditis and probably in all in some stage of the disease. 2. Endocarditis more commonly follows tonsilitis in children and young adult females than is generally believed. Possibly this accounts for the frequency of mitral stenosis in females. 3. This low grade streptococcic endocarditis is much more common than the so-called rheumatic endocarditis. 4. A large number of persons showing symptoms of the neurasthenic type are really suffering from a subacute streptococcic endocarditis. 5. Endocarditis may be active for considerable periods of time without symptoms. 6. A family incidence of tonsilitis and endocarditis (also appendicitis, gastric ulcer and other diseases which are often of streptococcic origin) is of frequent occurrence. 7. The pulmonary systolic murmurs so frequently found in "run-down" and anemic individuals are rarely functional.

On the other hand they usually indicate mitral regurgitation."

—R—

### Infectious Arthritis.

The role of the nose, throat and accessory sinuses in the causation of infectious arthritis has been critically examined by R. Hammond, Providence, R. I. (Journal A.M.A., Sept. 25, 1915). Most cases of this disorder coming to the orthopedic clinics of the Rhode Island Hospital and the St. Joseph Hospital during the past two years have been referred to the Ear, Nose and Throat Department for examination. The gonorrheal cases were not so referred. The referred cases were not selected in any way. The total number during the past two years was sixty-one, in which a large proportion showed tonsillar infection. Twelve of these patients were operated on, eighteen were not. The patients operated on showing marked improvement numbered only two, three gradually improved, one was better in a single joint and worse in others, and three were worse after the operation; three were not found to record. In the eighteen cases not operated on, operation was refused in ten, but four patients improved without it. In four cases in which it was not advised, two improved without treatment. Of two who were advised treatment without operation one improved without treatment, and two others were referred to the dentist. The results of operative treatment in these cases were not on the whole encouraging. There has often been seen a slow gradual improvement under routine orthopedic measures. In most of the cases the damage seemed to occur early and the time for the investigation and treatment of a focus is in the early stages. Patients who had previous attacks and recovered should have the focus removed if it can be found. The difficulty is in determining the certainty that the focus discovered is really the cause of the arthritis. Hammond's experience has shown that the greatest benefit in these cases generally is to be expected from stimulating measures to build up the general health of the patient.

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### Chronic Infection of the Tonsils. Its Relation to Systemic Disease.

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Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

The faucial tonsil is a globular mass of lymphoid tissue lying one on either side of the fauces in a recess (the sinus tonsillar) which is formed by the palatal arches.

It is the largest of the lymphoid nodules of the respiratory and alimentary tracts, and differs from other such nodules only in its size, its compactness and in the extent and complexity of its crypts. It has an internal surface, an anterior, a posterior and a superior border and a superior and inferior pole. It is originally developed in two lobes, a lower and an upper, which become fused shortly before birth.

It is attached to the walls of the sinus tonsillar by a root which includes a variable portion of its outer surface and of its anterior and posterior borders. This attached surface is covered by a fibrous membrane, the capsule, which is continuous with the fibrous mucosa of the surrounding mucous membrane. It presents on its epithelial surface the openings of from ten to twenty pits or crypts, which extend deeply into its substance practically as far as the capsule.

The sinus tonsillar, the walls of which surround the tonsil on all but its inner side, is a triangular depression bounded anteriorly by the anterior faucial pillar (palatoglossus muscle), posteriorly by the posterior faucial pillar (palato-pharyngeus muscle), superiorly by the tissues of the

soft palate and externally by the superior constrictor muscle of the pharynx. It is deep above, where it may end at the apex formed by the junction of the pillars; or it may extend considerably above this point into the tissues of the soft palate, which form a dome-shaped matrix for the superior pole of the tonsil surrounding it like a hood.

The supratonsillar fossa lies between the superior pole of the tonsil and the superior angle of the sinus. It is constant. It may be a distinct space, triangular in shape, with its faucial opening more or less completely covered by the upper segment of the plica, which at this point is sometimes called the plica supratonsillaris.

When the sinus extends high into the palate, the superior lobe of the tonsil pushes its way into this superior cavity and the supratonsillar fossa is reduced to a blind epithelial sac with walls in apposition. It may be very extensive, often admitting a probe as far as the plane of the external surface of the tonsil. A variable amount of lymphoid tissue is developed in its superior wall.

The crypts may be single and without noticeable change in calibre throughout their length; or they may be extensively branched and their calibre much greater below the surface than their faucial openings would indicate. The accumulation of cellular debris within them is so frequent that a mild degree of the irregular pocketing results. The crypts extend in a general outward direction. Those that empty into the supratonsillar fossa extend downward and outward. These latter drain



poorly, both on account of their direction and because of the closed condition of the fossa.

The capsule covers all surfaces of the tonsil not covered by epithelium. Theoretically it includes only that part of the deeper layers of the fibrous mucosa of the sinus that covers the attached surface of the main bud of the tonsil. As the mucosa of the more internal surfaces of the sinus, including the plicæ, have lymphoid nodules developed in them often directly continuous at the root of the tonsil with the lymphoid tissue of the main mass, it seems best to consider the capsule as including the fibrous mucosa of the entire sinus, even to the external rim of the plicæ. At this point it is folded upon itself and becomes the propria of the faucial mucosa.

It will be appreciated from the above description that the tonsil lies in and not under the mucous membrane; that it is in reality simply a complicated mucous membrane with lymphoid nodules developed in the more superficial fibres of its tunica propria. If this fact is kept in mind, the relations of its various parts to each other and to the surrounding tissues are easily understood.

#### THE BLOOD SUPPLY OF THE TONSILS.

*The Arteries.*—The tonsil is an extremely vascular organ, receiving its blood supply from the tonsillar and palatine branches of the facial, from the descending palatine branch of the internal maxillary, from the dorsalis linguæ of the lingual and from the ascending pharyngeal. Its chief blood supply is from the tonsillar and ascending palatine branches of the facial. These branches pierce the superior constrictor opposite the lower pole of the tonsil, ascend for a variable distance on the external capsular surface and enter the tonsil in its lower half. They are the most important arteries of the tonsil from the surgical standpoint, as they are the ones most often involved in postoperative bleeding.

The veins of the tonsil form a plexus lying in the walls of the sinus. The largest vessel of the plexus runs down the outer

edge of the palato-pharyngeus muscle and joins with veins from the epiglottis and the base of the tongue, forming a large trunk which empties into the pharyngeal plexus. A smaller vein runs down the anterior sinus wall and empties into the lingual veins.

*The Lymphatics.*—There are the two principal retropharyngeal glands, one on each side of the median raphe at the junction of the posterior and lateral surfaces of the pharynx, corresponding to the situation of the arch of the soft palate, with sometimes three or more additional lymph nodes on one side or the other. These glands correspond to the general situation of retropharyngeal abscesses, these being invariably found on one or the other side of the median line. They receive the lymph coming from the mucous membrane of the nasal fossæ and adjacent cavities and drain into the upper glands of the internal jugular chain. The glands of this chain also receive the lymph from the internal group of the sternomastoid glands. The lymphatics from the tonsil appear to drain into the posterior lymph glands of the tongue, thence into two lateral trunks, thence passing down the lateral walls of the pharynx, terminating in large glands of the internal jugular chain behind the posterior belly of the digastric. This is the principal meeting place of the neck lymphatics. A not inconsiderable number of the lymph vessels go directly from the posterior pharyngeal wall to the deep glands of the neck and the jugular region.

*The Relations of the Tonsil.*—The tonsil is so placed that its posterior-inferior limits are just in front of and above the angle of the jaw. It can never be felt on the outside except in cases of malignant growth.

Inferiorly the tonsil is in relation with the base of the tongue and the lingual tonsil, from which it may be separated by the lower segment of an extensive plica triangularis; otherwise the two lymphoid masses may be directly contiguous. Superiorly the tonsil is in relation with the soft palate into which it may mount considera-



bly above the junction of the pillars. Externally the tonsil lies directly on the superior constrictor muscle of the pharynx, to which it is but loosely attached except at its lower pole, where its larger vessels enter. Between the two there is a theoretical space, in which abscess formation often takes place (peritonsillar abscess). External to the superior constrictor is the pharyngo-maxillary space. It is filled with fat and areolar tissue continuous with that of the carotid sheath.

The internal carotid artery lies two cm. ( $\frac{4}{5}$  in.) behind and external to the posterior pillar.

#### TYPES OF STREPTOCOCCI FOUND IN TONSILLAR CRYPTS.

(1) The streptococcus hemolyticus which on blood agar produces a clear zone of hemolysis about the colony, appears in chains of round or slightly oval cocci. This is the type most constantly found in erysipelas, complications of scarlet fever, and various suppurative processes of streptococcus origin, especially peritonsillar abscess.

(2) Streptococcus viridans which on blood agar develops a very small gray colony surrounded by a zone of green, and which in smears occurs in pairs which resemble pneumococci, or in short and long chains of cocci arranged in pairs. The S. Viridans is usually without capsule and is the chief etiological factor in infections of endothelial and mucous surfaces.

It is by far the commonest micro-organism found in infected tonsils, both acute and chronic, usually a surface growth.

(3) The streptococcus mucosus which on blood agar produces delicate, colorless, transparent, glistening drops of a mucoid consistency and which appears in chains of diplococci surrounded by a thick capsule with no indentation between the pairs.

#### TOXIC PRODUCTS OF THE TONSIL.

A careful study of the toxic products of tonsils was made by Burmeister. Those tonsils, the extracts of which were most toxic when injected into guinea pigs, were invariably infected by the Streptococcus hemolyticus. It is logical to state that the

extract's toxicity depends on the toxic products elaborated out of the streptococcus itself as well as the action of the streptococcus on the tissue in which it is growing.

It is plausible to assume that local death of tonsillar tissue by the action of organisms, like the streptococcus, permits the absorption of tonsil protein and results in the formation of an amboceptor for this protein which, with the aid of the complement, is capable of splitting the protein. This splitting action, then, might occur either in loco or following the absorption of tonsil protein in the circulating blood. The toxic action of tonsillar products may then, in part at least, be responsible for many of the clinical symptoms manifested in the course of disease of the tonsils. The individual becoming sensitized to his tonsils exhibits from time to time mild or severe symptoms due to the toxic products of tonsillar origin.

The effect on the individual of continued sensitization in this manner can only be speculated on. Longcope has been able to procure an interstitial hepatitis somewhat resembling a cirrhosis, a myocarditis with scar formation and a glomerular and a parenchymatous nephritis in rabbits, cats, guinea-pigs and dogs by repeated sensitization with proteins. The frequency with which myocardial and renal lesions are found accompanying and following acute and chronic tonsillar conditions has long been known. These secondary conditions have been attributed usually to a systemic bacterial invasion with the tonsil as the atrium. This, no doubt, is in most cases the predominant etiological factor. It does not seem improbable, however, that some of these conditions may be due, in part at least, to toxic protein products of tonsillar source.

Such conditions as asthma, convulsions and even true epilepsy may be produced through the agency of the toxic products of the human tonsil.

SYSTEMIC DISEASES IN WHICH CHRONIC TONSILLAR INFECTION MAY BE THE ETIOLOGICAL FACTOR.

*Acute Rheumatism.*—Acute articular rheumatic joint infections are the result frequently of a primary infection of the faucial tonsils or tissues about them.

Inoculation of animals with the streptococci obtained from the crypts of chronically infected tonsils will usually produce an acute arthritis, either single or multiple, and in many of the animals produces an arthritis of the deforming type.

In acute rheumatism the bacteria obtained from joint exudate and from rheumatic nodes have been studied by Rosenow.

An interesting phase of the streptococcus study is the mutability of this organism. Rosenow especially has worked out this idea. It is a well known fact that certain strains of streptococci assume different cultural and morphological characteristics under certain conditions and environment. Rosenow classifies the streptococci as follows, their virulence increasing in the order named: Hemolytic streptococcus, *Streptococcus rheumaticus*, *Streptococcus viridans*, *Pneumococcus* and the *Streptococcus mucosus*. The hemolytic variety has an affinity for joint structures, while the viridans has an affinity for heart valves. By a shake culture on ascites dextrose agar, Rosenow was able to isolate three strains of streptococci from the exudate of joints in acute rheumatic fever. The cultural and morphological characteristics of each strain are different. When the rheumatic strains under cultivation revert to the hemolytic type they lose their affinity for the endocardium and pericardium but acquire greater affinity for joint structure.

Rosenow examined the exudate obtained from the joints of eight cases of acute articular rheumatism and found organisms corresponding closely to the *Micrococcus rheumaticus* in seven of the cases. Blood cultures were made in four cases and gave positive results in two. Cultures of the tonsils yielded similar organisms in two cases. The cases were all typical and not unusually severe. In four there was distinct history of tonsillitis.

There can be no other reason for the

prevalence of rheumatic fever in children than the frequency of local infections in the throat and nose. Quite as frequently children have endocarditis, without other symptoms of rheumatic infection, which has its source in the throat.

#### STREPTOCOCCUS ENDOCARDITIS.

Davis (Jour. of Inf. Dis., May, 1913,) obtained practically pure cultures of *S. Viridans* in the crypts of 40 per cent of tonsils removed from patients with endocarditis which was supposedly of tonsillar origin. *S. Viridans* may usually be isolated from lesions of the endocardium and when injected into animals invariably localizes on the heart valves.

Such considerations as the foregoing make it clear that in prevention of infection lies one's hopes rather than in cure after the endocardium has been invaded by these micro-organisms. Since the throat appears to be the atrium of infection in most cases, it is one's duty to insist on the complete removal of diseased tonsils. If these structures have been the seat of more than one inflammatory attack they are no longer healthy even though they may appear normal. If they are enlarged and glassy in appearance with open crypts they are dangerous, since they provide excellent opportunity for the lodgment and growth of bacteria. Even small atrophied tonsils often are found on excision to contain in their depths pockets of pus and germs.

#### ACUTE THYROIDITIS AND GOITER.

Theisen (Annals O. R. A. L., March 1913,) discusses seven cases of acute thyroiditis in all of which except one the inflammation of the thyroid gland occurred with or directly after attacks of tonsillitis. The patients were all girls and young women, and a search of the literature shows that this is true in the majority of the cases. The only case that did not occur with tonsillitis was one that developed during the course of pneumonia. A point of particular interest is the fact that two of the patients have, since their attacks of acute thyroiditis, developed well marked goiters. Two others had attacks of hyperthyroidism with all the typical



symptoms developing soon after the attacks of acute tonsilitis and thyroiditis.

These facts may not be important etiological factors in the development of goiter, but it is by no means impossible that the repeated inflammatory attacks to which the gland was subjected in the two cases before referred to may have partly, at least, been responsible for the subsequent chronic hypertrophy of the gland.

Clinically there is an important relation between the infections in the nose and throat and hyperthyroidism. In patients between the ages of 16 and 24 from 35 per cent to 40 per cent give a history of repeated attacks of acute tonsilitis, and many of them have a chronic pharyngitis and rhinitis with enlarged tonsils and adenoids.

#### ULCER OF THE STOMACH AND DUODENUM.

The cause of gastric and duodenal ulcer is, in most cases, undoubtedly a specific micro-organism which has been found in a number of cases and which when properly applied to animals has resulted in the production of these ulcers. In a large proportion of these cases there is a great amount of infectious material poured out of the tonsils. The swallowing of this septic material is a source of irritation to the mucous membrane of the stomach, even though one denies that swallowed bacteria may actually produce gastric ulcers.

The most important factor in the management of ulcer of the stomach—the recognition and removal of various foci of infection—has been overlooked in the past.

Rosenow's work shows that ulcerations of the stomach and acute non-traumatic appendicitis are conditions in which the mucosa is attacked from behind through the blood stream by bacteria which are in the blood and have a selective affinity for these particular areas. This presupposes a focus of infection with repeated invasion of the blood by virulent bacteria.

Emulsions of tonsils injected intravenously in rabbits, guinea-pigs and dogs have repeatedly produced Arthritis (streptococcal), hemorrhages of stomach and ulcer of stomach and duodenum.

#### CHOLECYSTITIS AND GALL-STONES.

Rosenow, in November, 1914, says: "When streptococci, from various sources, attain a certain grade of virulence, they are prone to produce on intravenous injection cholecystitis and gall-stones, with large numbers of streptococci as the nuclei. The fluid contents of the gall bladder, the center of stones and particularly parts of the wall of the gall bladder of twenty-nine cases of cholecystitis have now been studied. In twenty-four cases, in all of which increase in thickness and other changes were more marked, streptococci were isolated in all but three and in pure culture in ten. In sixteen cases streptococci were found in the wall when the contents were sterile or contained only the colon bacillus. The colon bacillus was found with the streptococcus in only ten cases, once in pure form, once in association with the *Bacillus Welchii*, and once with the staphylococcus. (Rosenow, J. A. M. A., Nov. 21, 1914.)

#### GASTRIC FEVER IN CHILDREN.

The clinical association of tonsilitis with gastric fever is of frequent occurrence. It occurs so frequently that one may believe that the pathological condition is common to both—or that these conditions are inter-related. An interesting feature is that while there are active symptoms of a deranged stomach, with fever, acetone breath, flatulence, colic and usually constipation, there will usually be an accidental discovery of some pin-point tonsilitis involving the lacunæ of the tonsil. The temperature is usually quite high, between 103° and 104°. There is seldom pain on swallowing or any evidence of disturbance in the throat. The throat manifestations improve just as soon as the gastric symptoms subside, so that one is forced to believe that both conditions are one and the same infection. When there is a recrudescence we again note the same symptoms, to wit: first, the general gastric disturbance in which pyrexia, acetone breath, metoroism, anorexia and usually constipation exists. In addition there to the local evidence of a benign follicular tonsillitis.



The frequent occurrence of gastric fever demands a careful inspection of the tonsils, and when such tonsils show evidence of hypertrophy they should be treated as diseased tissue which may be a focus for future maglignant infections. Too much importance cannot be placed on the necessity for throat inspection in every child that refuses to eat.

#### TUBERCULAR ADENITIS.

Tubercular adenitis is usually a localized tubercular affection most frequent in childhood from the sixth to the fifteenth year, although it may occur in early infancy, and seems to have some relationship to diseased tonsils, adenoids, and general pharyngeal disturbance. It has repeatedly been demonstrated by Wood and others that tubercle bacilli can be made to invade and pass through the faucial tonsil without producing tuberculosis of the tonsil itself, the tonsils being merely the port of entrance. Certain it is that after removal of the faucial tonsil in many children previously suffering, to a greater or less degree, from enlarged cervical glands, these glands disappear and are no longer palpable to the finger.

Cervical adenitis is not an accompaniment of a general pulmonary tubercular process, since the lymph glands of the lung drain directly into the blood stream, the drainage from the two areas having no direct meeting place, unless near the point of final entrance into the general blood stream.

#### PULMONARY TUBERCULOSIS.

Ten or fifteen years ago it was quite commonly believed that disease of the tonsils was a frequent cause of pulmonary tuberculosis; but subsequent research appears to have proved that tubercle bacilli may enter and pass through the tonsils and cause disease of the cervical lymph-nodes while the tonsils themselves may escape all injury; and this research has also shown that there is no direct connection between the cervical lymph-nodes and the pulmonary lymphatics and, therefore, that involvement of the lungs associated with cervical adenitis must be a systematic in-

fection rather than a result of the disease of the lymphatics.

From a study of the literature one is forced to accept as correct the consensus of opinion, which now fully sustains the personal view of Jonathan Wright, who in 1912 said: "To tell the truth, I do not believe there is any relation between the tonsils and pulmonary tuberculosis."

#### RIGGS' DISEASE.

Riggs' disease has for years been suspected of primary relationship to various systemic disturbances, including particularly certain chronic or recurrent arthritic affections and possibly, too, some of the anemias of obscure origin and degenerative lesions of various parenchymatous organs. Following these ideas, which are essentially those of Hunter and others, the possibility of more generalized influences must necessarily occur, the effects of either of the endamebiasis or of the associated bacteria, or both. Direct extension of the inflammatory processes or lesions due to metastasis by lymphatic or hemic conviction due to the effects or swallowed or absorbed toxic products are logically, at least, to be thought of.

Work recently carried on by Smith and Earret indicate that the parasitic amebas of the mouth hold an important relation in the etiology of Riggs' disease. Believing that from their proximity to pyorrhea pockets and their favoring anatomic structure, the tonsils might be invaded and form another habitat for these endamebas, they made a number of examinations of tonsils to determine their occurrence in these organs. Seventeen cases were examined, five of the number showing motile amebas of the type of *endameba buccalis*.

All of these seventeen cases were instances of some type of chronic tonsillitis, usually with tonsillar hypertrophy. The tonsils of the five persons in whom these organisms were demonstrated were all large with pouting crypts; and were removed from young persons presenting the usual local and general symptoms of chronic tonsillitis with irregularly occurring exacerbations.

## SYPHILIS.

The importance of primary syphilis of the tonsils is not so much in its frequency as the possibility of its passing unsuspected by the patient and unrecognized by the physician. One should always look with suspicion on a sore throat that has lasted over two weeks, does not respond to treatment of simple angina and is accompanied by pronounced glandular enlargement on one side only.

Like primary lesions elsewhere, the uncomplicated process is constructive rather than destructive, and early in its course takes on a distinct induration. Both size and hardness have considerable variation. The surface of the tonsil is usually not only eroded or superficially ulcerated, but may be phagedenic or gangrenous, in which case there is an offensive odor. At the end of a week or ten days the lymph glands under the angle of the jaw or beneath the sternomastoid muscle on the affected side undergo a non-inflammatory enlargement. There is no reddening or involvement of the skin, but the mass takes on a smooth, brawny, pork-like hardness without suppuration. This glandular reaction is of the greatest diagnostic importance, beginning soon after the appearance of the primary lesion; its peculiar characteristics remain until the second stage of the disease is well established.

There can be little doubt that the frequency of chancre of the tonsil is due largely to the location and anatomical structure of the tonsil. The spirochetes, carried past the lips and tongue, easily lodge in the crypts and follicles of the tonsil where an almost ideal spot is found for their development and subsequent invasion of the entire system.

## PRIMARY GANGRENE OF THE TONSIL.

While this condition is comparatively rare, it is necessary to keep its possibility in mind, since it is rapid in its action and exhibits profound systemic effects. C. C. Sandels (Pa. Med. Jour. July, 1914) collected the histories of eleven cases and reports one of his own. Of the twelve cases reported, including the one here mentioned,

four recovered and eight died as a direct result of the throat condition. In seven cases the gangrenous process was limited to one tonsil; in four, both tonsils were involved.

## QUINSY.

The normal atrophy of tonsillar involution after early childhood may predispose to attacks of septic inflammation of the tonsil and especially of its surroundings. The shrinkage of the lymphoid tissue of the tonsil dilates the follicles which fill with foul epithelial debris. The pressure of such collections may create granulating erosion of the follicular wall with consequent infection of its surroundings. The fibrous shrunken parenchyma of the tonsil usually is not capable of inflammatory reaction itself but transmits the infection into the peritonsillar tissues beyond the capsule. For this reason peritonsillitis, usually suppurative, is characteristic of the atrophic tonsil, which by reason of its fibrous state is not in open communication with the lymphatics. The upper portion of the tonsil, and especially its palatine portion, is the one most often the cause of suppurative peritonsillitis.

In the interval between attacks of quinsy the eye can seldom distinguish the septic atrophic tonsil from the harmless kind. Palpation, however, will often find the bed of the tonsil tender on pressure, and the history of repeated attacks of tonsillitis or peritonsillar abscess makes tonsillectomy justifiable.

## DIAGNOSIS OF CHRONIC TONSILLAR INFECTION.

A tonsil may contain foci which are causing the most serious systemic infection, where a careful examination may fail to discover anything which would throw suspicion on these structures, and where the infection in the tonsil can be disclosed only after the tonsils are removed. The absence of an acute attack of sore throat at the time when the systemic disease developed in no way exclude the tonsils as the possible focus for the trouble. The history of attacks of tonsillitis in previous years should always throw suspicion on



the tonsils as the possible seat of chronic latent foci, and when the systemic condition is serious enough to justify the procedure, the faucial tonsils should be enucleated unless, of course, foci of infection can be detected elsewhere.

An inspection of the pharynx will usually show distinctly when the trouble is located in the tonsils, for these structures will appear more or less congested, often with a spongy appearance produced by a slight edema over the surface of the tonsil. On the other hand, it sometimes happens that a patient will state that he has never had tonsillitis or sore throat, and yet an examination of the tonsils will disclose the presence of pus which can be expressed from the tonsil.

The tonsil may or may not be enlarged. When it is distinctly enlarged the evidence of chronic infection is, perhaps, more readily recognized than when the tonsil is shrunken. The presence of enlarged tonsils is, however, not in itself a positive evidence of chronic infection, although an enlarged tonsil is frequently the seat of chronic infection. The most characteristic change in a chronically infected tonsil is the presence of a distinct congestion on its surface, often extending over the fold from the anterior pillar which so often partially covers such tonsils. Very often one discovers a large, flat tonsil which does not protrude into the pharynx, the surface of which presents a granular appearance. The condition is one which is produced by an hypertrophy of the connective tissue stroma, which has, in a measure, obliterated the parenchyma, and thus brought about a distinct shrinking of the tonsil. Pressure applied to the base of such a tonsil will, as a rule, express droplets of pus from several points on the surface of the tonsil.

Encysted pockets of pus are found much more frequently in the depth of the tonsil than near the surface. The reason of this is obvious.

#### INDICATIONS FOR TONSILLECTOMY.

In a case suffering from a chronic systemic infection, the faucial tonsil should always be under suspicion as the most fre-

quent source of the trouble, and in cases where no other foci can be detected, one should not hesitate to consider the removal of the tonsil, provided the systemic infection is severe enough to warrant the operation, even in cases where the history of the patient and the examination of the tonsil discloses no positive evidence of the tonsillar origin of the trouble.

Not alone will a suppurative ear or nose condition often be cured by the removal of tonsils and adenoids, because that may be due to the removal of pathologic structures which would have extended by continuity, but a suppuration quite distinct from the tonsils will often be markedly improved or cured by removing a definite focal point. The resistance and healing power of the patient is given opportunity to recuperate and the individual thus is enabled to destroy other focal points of chronic infection and put the system in a condition to ward off acute attacks.

Another reason why they should be removed in preference to any other structure is because with properly carried out technic there is less danger and inconvenience to the patient without losing or interfering with some functioning structure.

Tonsils should be removed if serious symptoms can be logically attributed to them. The more serious the symptoms, and the more direct the connection, the more imperative is the operation. They should be removed for recurring peritonsillar abscess and during acute attacks. They should be removed for recurring and persistent cervical adenitis that cannot be accounted for by a focus in the teeth, vestibule, scalp, nose, naso-pharynx, or ears. They should be removed for recurring subacute tonsillitis. This does not include those acute infections of the mucous membrane of the upper respiratory tract often accompanied by sore throat, which do not start in and only incidentally involve the tonsillar ring. They should be removed if it is believed or even seriously suspected that they are the entering point of constitutional infection. While few would dispute this, its practical application in indi-



vidual cases must be often influenced by different opinions. The tonsils are only one of several avenues through which infection may enter. As it is often the easiest one to close, an experimental operation in serious cases may be justifiable. It is, perhaps, better to sacrifice many innocent tonsils than to allow one guilty one to escape, but it is also true that every unnecessary operation does a little harm to medical science. It is unfortunate that we can never be sure from its appearance that a tonsil is innocent, and not very often that it is guilty. Very large tonsils should be removed, as experience proves that persons are better off without them.

Quite probably diseased tonsils cause a susceptibility to diphtheria, as they certainly do to follicular tonsillitis. After complete recovery from a diphtheria attack, when the general condition is perfect and the heart is in good condition, tonsillectomy should be considered. Tonsils which are wholly exposed may be obstructive, and require removal on that account, irrespective of size.

If the tonsils should be removed, they should be completely removed with the capsule. This is really another form of the statement that the actual size of a tonsil is comparatively unimportant. It is generally the deeper portion that it is the more important to remove.

Tonsils should not be removed for trivial symptoms. Tonsillectomy is not justifiable simply because the tonsils protrude in front of the pillars, nor because they look ragged, nor for occasional sore throat, nor because they contain plugs, nor because the patient is under ether for adenoids, nor to protect the child from indefinite infection, nor for an occasional attack of simple acute tonsillitis.

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### Tonsillectomy in Acute Tonsillitis.

T. L. HIGGINBOTHAM, M.D., Hutchinson.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

For centuries surgery was an empirical practice, but at present, so far as possible, it is based on scientific principles. The poultice treatment of carbuncles had passed from age to age, but in the light of reason it became plain that poulticing was not surgery and carbuncles are now excised. The acutely inflamed appendix is no longer treated by costives or purges, but by removal early in the attack. Blind infected eyes are enucleated and lymphatic glands removed in blocks.

Tradition still controls our dealings with the acutely inflamed tonsil; we cling to ancestral customs, forgetting that a surgical principle must apply to all parts of the body. Can it be said that the antiquated treatment of the inflamed appendix or carbuncle is less efficient than the treatment we still give the inflamed tonsil? If the medical treatment of tonsillitis is right the surgical treatment of appendicitis is wrong; a scientific principle cannot be shifted to suit conditions.

A few decades back no one understood the complications of appendicitis, today this is common knowledge. Today, too, the sequellæ of tonsillitis are well known, but no consistent effort is made to prevent them. The conscientious abdominal surgeon removes the appendix early in the first attack in the same way the conscientious throat surgeon will come to remove the

tonsil. Waiting to operate the appendix in the interim exposes the patient to subphrenic abscess and general peritonitis; waiting to operate the tonsil in the interim exposes the patient to arthritis, nephritis and endocarditis. The treatment for the appendix is the treatment for the tonsil.

At present the laryngologist is seldom called to a case of acute tonsillitis because the general practitioner can treat it as well as the specialist. He can never take his proper position till he is prepared to do for the tonsil what the general surgeon is doing for the appendix.

It was from considerations such as these that I decided to remove the acutely inflamed tonsil as a prophylactic measure. All the steps in the technique of the operation had been carefully worked out, and its advisability discussed with conservative physicians. I was convinced that the operation could be done with safety and that the complications of tonsillitis, would be prevented. The operation was first done in November, 1909. The patient had acute follicular tonsillitis, and had already developed arthritis of the right hip joint. Recovery was uneventful, and the complication immediately disappeared.

The results in the first series of cases were so favorable that I decided to give no other treatment in acute tonsillitis till experience had tested this one. To date as many as five hundred acutely inflamed tonsils have been removed. In no case has there been an extension of the infection or alarming loss of blood. In fact, the bleeding is much less than when the tonsils are operated in the uninflamed state. No complication of tonsillitis has arisen in any one of these cases after the operation, and those already existing have subsided with astonishing rapidity.

As there are physicians here who are familiar with the results of this method, I shall not enter into further details. The treatment has proven its worth in every way. No better results are obtained in the surgical treatment of acute appendicitis.

The methods ordinarily employed in operating the tonsil are not to be advised



in the inflamed condition. The pillars and the soft palate must be shown the same consideration as the friable intestines. No trauma must be made to any tissue other than the removed gland. If the patient is old enough to exercise self control, a local anæsthetic is to be preferred. The most delicate instruments should be used, keeping close to the capsule and well to the outside of the leucocytic ring.

As to what the results would be with "strongarm" or "nail digit" methods I am unable to say, but such methods are not in favor in operating under similar conditions elsewhere. Uninflamed, the tonsil is an innocent physiological structure, but when once attacked by infecting micro-organisms it becomes a dangerous pathological focus, an irritating foreign body, a veritable bacteriological laboratory. Its peculiar construction enables it to liberate into the circulating fluids virulent germs and toxins. Its strategic position allows the stomach and lungs to receive the cultures in pure form. At best the body has little protection against bacterial invasion through the tonsil. The literature is filled with reports of dangerous diseases secondary to tonsillitis. Thousands of people wander from doctor to doctor, from health resort to climate, from quack to quack, suffering from complications of acute tonsillitis. Most of these unfortunates had treatment which did them no good.

In conclusion I want to say that tonsillectomy in acute tonsillitis is a safe surgical procedure. With proper technique there is no danger from excessive hemorrhage or extended infection. Tonsillectomy in acute tonsillitis is better surgery than tracheotomy or blindly stabbing for a quinsy. Tonsillectomy in acute tonsillitis is the only remedy which cures the disease and prevents all complications from the present attack.

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The Northeast Kansas Medical Society will hold its next regular meeting in Kansas City on February 24. An interesting program is being prepared, and those who attend will be well entertained.

## A Theory of the Function of the Adenoids and Tonsils.

T. A. JONES, M.D., Liberal, Kan.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

The human body supplies the three essentials for bacterial growth; food, heat and moisture. Without protection it would become the prey of any germs with which it happened to come in contact. It protects itself in various and ingenious ways. The skin, through its dryness and impenetrability, protects the whole outside. The mucous membranes of the different canals and cavities are designed for the same purpose. If the skin is kept moist and two surfaces approximated, infection may follow as in intertrigo. In the same way where mucous membranes are moist some means must be provided to protect them. The urinary bladder is separated from the outside by the long, narrow urethra in which the natural current is outward. This, under normal conditions, prevents the entrance of bacteria, but if through some error in technique we introduce them, infection often follows. This indicates that Nature has no reliable provision for destroying germs which have once entered the bladder. The womb is protected from infection by the native bacteria of the vagina which, doing no hurt themselves, destroy others. The outward direction of the natural current, the tight sphincter ani and the dryness of its contents all tend to protect the lower bowel. But since unsterilized liquids may be carried high into the colon with impunity, it is likely that foreign germs are destroyed by the abundant native growth.

At the orifices of the upper end of the body different conditions prevail, and more complicated mechanism must be devised. The natural current is inward, and it is impossible to prevent the entrance of bacteria. They must be disposed of within. In a large cavity like the stomach, with its tolerant mucous membrane, this is easy, and is probably one of the functions of the hydrochloric acid. But in the delicate alveoli of the lungs it attains all the dig-



nity of a problem. In fact it is surprising that the small air chambers can be maintained at all.

In the first place bacteria must be kept out of the finer bronchial radicles. For this purpose Nature has devised a very ingenious filter. In passing through the nasal cavities, the air is set in whorls by the curved bodies of the turbinates so that all solid particles are brought into contact with walls of the upper air passages, which are covered with mucous. The bacteria adhere to such a degree that by the time the smaller bronchioles are reached the air is sterile. The few germs which reach the bronchioles are waved outward by the cilia.

The outer air passages, in which the bacteria lodge, must be frequently infected. The inflammation would tend to spread by continuity of tissue in all directions. It must not be allowed to penetrate the vital alveoli. This is especially important when the child is young and has acquired little immunity, and when the alveoli are small and easily occluded by an exudate. It is at this time that broncho-pneumonia is so dangerous.

The purpose of the lymphoid tissue of the naso-pharynx is this: When air contaminated with virulent germs enters the nasal passages, some of the germs lodge on the hanging folds of the adenoids. Inflammation begins, and the folds are glued together by the exudate. The toxins are absorbed and anti-bodies are formed in the body fluids. If the dose of the toxins is not sufficient to immunize the body the tonsils are next involved, and maybe all the scattered lymphoid tissue of the pharynx. In this way immunity to the particular germ is established before the alveoli of the lungs are reached. When the vitality is exhausted by disease or starvation, this protective reaction fails, and again as in early life, broncho-pneumonia becomes a common cause of death.

Argument is furnished us by the position and structure of the adenoids and tonsils. The adenoids hang free in the naso-pharynx, where the germs must strike

them. They are composed of lobules between which the infection may spread readily. The tonsils have crypts which have been referred to as culture tubes. Both are composed of lymphoid tissue, that is the tissue that absorbs.

The difference of body reaction to inflammation in different localities is striking. In the brain an abscess may reach the size of a fist without noticeable symptoms, in the lung the consolidation of a number of lobes may cause only moderate reaction, in the tonsils a slight redness only may be accompanied by high temperature, high pulse rate and high leucocytosis. We are entitled to the inference that this difference is due to the fact that the tonsils are designed for absorption.

Clinically we observe these small encounters in which the invading hosts of disease are repulsed. One is awakened in the night by the snoring of the child. It does not care for breakfast. Examination shows an elevation of temperature and pulse rate, a coated tongue and some redness of the tonsils and pharynx. The adenoids are swollen and covered with mucus. These symptoms may abate as the day wears on, or progress into an active, florid tonsillitis.

One example will serve to illustrate my meaning. In the winter and spring of 1913, a family of four children between the ages of one and six was visited by two attacks of those infections known as colds which involve to a greater or less extent all the structures of the nose, throat and lungs. One girl of three had, in these attacks, complete obstruction to breathing, but in each attack less bronchitis than the others. In the summer of 1913 her adenoids were removed. In the winter of 1914 the same family was visited by three attacks of the same sort of infection, the same girl had no obstruction to breathing, but in two of the attacks suffered much more severely with bronchitis than the others, and had to go to bed.

It is then the business of the lymphoid tissue of the naso-pharynx to become inflamed. Its function is to set free in the

body the antigens of any virulent germs contained in the air we breathe so that a reaction of the body fluids is provoked and immunity established before the infection spreads to the vital air cells of the lungs.

It is to be expected that this physiological inflammation would now and then go to extreme, that this playing with fire on the part of Nature would sometimes lead to conflagration. Just when the limit of usefulness is reached in an individual case, it is impossible, in the present state of our knowledge to decide. When the tonsils become the seat of repeated exhausting inflammations, when the cervical glands are chronically enlarged, when quinsies occur or along with continued inflammation of the tonsils the heart, joints or kidneys are involved, or when the nasal passages are occluded by the adenoids, the indication for surgery is no longer in doubt. But the enlarged tonsil, which gives no symptoms, and the adenoids, which cause little obstruction, call for more study. It may be only a physiological hypertrophy in response to greater need for protection. Certain it is that a proper understanding of the function of the adenoids and tonsils will cause our brethren of the snare and guillotine to pardon where they are accustomed to execute. Or if it is necessary to remove the adenoids, they will not do a radical operation as one does for a malignant growth, and scarify the whole nasopharynx, but will use some more humane instrument which gently clips them at the base.

My plea is that we shall not look upon the lymphoid structures of the nasopharynx as enemies but as friends; not as aliens, but as useful, patriotic citizens of the body commonwealth, or as soldiers who must sometimes be sacrificed in the protection of our frontier.

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Dr. F. A. Mills, of Mound City, is in Chicago taking some review and post-graduate work. He will spend several weeks there.

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Read Bulletin No. 2 on page XIV.

## NOTES FROM THE MEDICAL SCHOOL

### The Effects of Solutions of the Inorganic Salts Upon Tissue Irritability.

S. A. MATTHEWS, Lawrence, Kan.

As far back as 1839 James Blake, an English physiologist, studied the effects of solutions of certain of the inorganic salts upon the irritability of living tissue; and called attention to quite a number of very interesting changes in muscular irritability in response to the solutions used. He paid special attention to the effects of solutions of calcium, strontium, and barium salts, and observed that barium in weak solution (1/3000) caused a marked increase in muscular irritability, causing the isolated muscle to go into a state of continual twitchings which might continue for some time (30 minutes or more). He also observed that the increased muscular irritability caused by barium could be reduced back to normal or below normal by adding a few cc. of a 5 per cent Ca Cl<sub>2</sub> solution to the barium solution. Strontium also exhibits the same antagonistic action towards barium as calcium, but to a less degree. Blake went further, and perfused animals with solutions of these salts, and noted a like effect, i. e., barium caused an increase in irritability of all contractile tissues which was antagonized by calcium and strontium.

Later Sidney Ringer (1882-1886) took up the same line of investigation, in which he corroborated most of Blake's findings. Working on the frog's heart, using the perfusion method, he called attention to the mutual antagonism between the salts of potassium and calcium in toxic doses; the former tended to cause a relaxation of the heart's muscle, while the latter tended to increase the contractions of the muscle. He also observed that while both calcium and veratrine, when administered alone, caused a prolonged systolic contraction of the heart, calcium would antagonize veratrine and veratrine would antagonize calcium. The same he found to be true in regard to the skeletal muscles. Here veratrine caused a prolonged relaxation which



was antagonized by calcium, making the veratrized muscle respond normally when stimulated.

Later (1896 to present time) J. Loeb became interested in the action of the inorganic salts upon living organisms. He has been able to confirm most of the finding of the preceding investigators, but has gone somewhat further, in a theoretical way, in that he has offered more rational interpretations of many of the phenomena of irritability than had been before propounded.

Living matter, as we know it, exists in a particulate form; an aggregate in colloidal solution held together in physiological units—cells. Aggregates of these cells form tissues, etc. Living matter thus organized, lives, and moves, and has its being in a solution in inorganic salts, viz.: Na, K, Ca, Mg, etc. It responds to changes in the environment (stimulation) by the liberation of energy which may exhibit itself in movements or other forms of activities. The changes in response to stimulation are an expression of irritability; a phenomenon fundamental to all living matter. Living matter may, and probably did, in the beginning, exist in an environment of pure water. Generally speaking, the phenomena of life are exhibited only in the presence of organic salts in solution in water.

One of the fundamental facts brought out by these investigations is that living matter in the form of the body tissues, will not retain its irritability long in a pure solution of any one inorganic salts. *A pure solution of any one of the salts normally present in the fluids of the body acts as a poison on the tissues.* The irritability of the several tissues of the body manifests itself only in the presence of a solution containing several of the inorganic salts, viz. Na, K, Ca, Mg, etc. Tissue will lose its irritability after a time, when placed in a pure Na Cl solution, but will regain it, if Ca be added to the Na Cl solution. If placed in a pure solution of K salts, all irritability quickly disappears, but will return again upon the addition of

Na, or better, Na and Ca. From this it is evident that any one of the salts normal to tissue is poisonous, when alone. Its toxic effects are antagonized more or less completely by any one of the other normal salts and is completely antagonized by their combined action in the proper proportions.

Transfusion of an animal with a pure sodium chloride solution (0.8 per cent) diminishes and eventually (one hour) abolishes the irritability of the muscles in response to motor nerve stimulation. Subsequent perfusion with 2 per cent calcium chloride restores the irritability. Transfusion of an animal with a 2 per cent calcium chloride solution diminishes the irritability of the muscles, in response to motor nerve stimulation, which is restored by subsequent irrigation with sodium chloride (0.8 per cent).

Here are two salts (Na Cl and Ca Cl<sub>2</sub>) both normal to the body fluids. Either one of which when applied to tissue in pure solution causes a diminution of irritability, yet the one will antagonize the toxic effects of the other, and when acting together in the proper proportions (Na Cl 0.8 per cent and Ca Cl<sub>2</sub> 0.025 per cent), are nontoxic.

Magnesium is normal to the body fluids, but when applied to tissue in pure solution, quickly abolishes all forms of irritability and will bring about a state resembling anesthesia. A small amount of calcium chloride solution will abolish instantaneously the effects of magnesium sulphate. These two salts when administered alone diminish tissue irritability, magnesium more than calcium, yet they are reciprocally antagonistic.

Not to go into the numerous theories proposed by Loeb, Lillie and others, to explain these reactions; suffice it to say that living tissue will respond to stimulation only when bathed in a combined solution of Na, K, Ca, and Mg in their proper proportions—Na Cl 0.8 per cent, KCl 0.025, CaCl<sub>2</sub> 0.003, and MgCl<sub>2</sub> 0.001. An increase or decrease in the proportion of any one of these salts will reflect deleteriously



upon the tissue.

Going back to the antagonism, already mentioned, which exists between barium and calcium and also between veratrine and calcium, some very interesting physiological analogies have been observed. Barium greatly increases the irritability of muscular tissue which is offset by calcium. The same kind of antagonism exists between calcium and veratrine. The extirpation of the parathyroid glands in most animals is followed by a very decided increase in muscular irritability, so much so that an animal soon goes into a state of tetany (muscular twitching accompanied with tonic spasms). The administration of any soluble calcium salt intravenously (calcium lactate 5 per cent) will immediately reduce the muscular irritability to normal just as it will in a case of barium or veratrine poisoning. Magnesium acts in a like manner. Calcium and magnesium both diminish muscular irritability, yet calcium antagonizes the depression caused by magnesium. These peculiar interrelations of the action of the inorganic salts have suggested certain therapeutic applications. Certain diseases are characterized by a heightened irritability of certain tissues of the body. If the tissue so affected is the reflex nervous mechanism, then convulsions will be characteristic symptoms. If the tissue affected is the peripheral motor nerve endings or receptive substance in the muscle, the muscular twitchings (tetany) will predominate. These conditions of hyperexcitability are antagonized by calcium and to a greater extent by magnesium. This has suggested magnesium in the treatment of such diseases as tetanus (lock-jaw), tetany, eclampsia, and for convulsive poisons. The intense depression caused by magnesium renders it a very efficient block to motor nerve impulses, which is quite easily reversed by the administration of calcium.

(TO BE CONTINUED.)

—R—

Watch the advertising pages for further announcements of the semi-centennial meeting.

### Diabetes Mellitus.

In view of the reported successful treatment of diabetes mellitus by the administration of the lactic acid bacillus, A. C. Henderson, New York (Journal A.M.A., Feb. 6, 1915), reports the results of the treatment in his hands in three cases, under a regular antidiabetic diet, equal to a carbohydrate intake of 15 gm. These cases were observed at Gouverneur Hospital, New York, in the service of Dr. J. H. Huddleston. Another case is reported from the practice of Dr. H. O. Mosenthal. The lactic acid bacillus solution was given regularly, and urinary examinations were all made by one person, with Benedict's modification of Fehling's test for the quantitative determination of glucose, for the qualitative demonstration of acetone, Legal's test; for diacetic acid Gehrhardt's ferric chlorid reaction. The case histories are given with tabulated statements of the urinary and other examinations. In Dr. Mosenthal's case, the tests were all like this. No improvement was noticed during the treatment, and the conclusion is drawn from these four cases observed casually that the administration of fluid culture of the lactic acid bacillus had no beneficial effect either as to the glycosuria or the acidosis.

—R—

### Blood Vessel Repairs.

L. Eloesser, San Francisco (Journal A. M.A., Jan. 30, 1915), refers to a case in which hemorrhage of the femoral vein was stopped by tacking over the opening in the vein a piece of fatty tissue removed from the groin. The patient died twelve days later in a senile delirium and the necropsy showed the lumen of the vein to be free from clot and its walls smooth. The graft was adherent and not necrotic. He discusses the literature which he has found of similar cases, with treatment in like manner, and recommends free grafts of fat or fascia, sewn over defects in the walls of veins as a simple and safe substitute for suture, when the latter is impracticable.

—R—

Do not forget to look over the advertising pages, there is always something new.

# THE JOURNAL

*of The*

## Kansas Medical Society

**W. E. McVEY, M.D.** - - - - - **Editor**

ASSOCIATE EDITORS—C. W. REYNOLDS, C. C. GODDARD, HUGH B. CAFFEY, O. P. DAVIS, W. E. CURRIE, ARCH D. JONES, K. P. MASON, H. N. MOSES, C. S. KENNEY, D. R. STONER, J. A. DILLON, W. F. FEE.

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### Semi-Centennial Meeting.

The semi-centennial meeting of the Kansas Medical Society, which will be held in Topeka May 3, 4 and 5, will be the best meeting and the most largely attended meeting in the history of the society.

The Council, at its January meeting, provided for a three days' session beginning Wednesday, May 3. The regular program of the society will be begun on Wednesday. Thursday will be set aside entirely for clinics and lectures by medical men of national reputation. On Thursday evening an open meeting, or public meeting, will be held, and an address will be delivered by some man who is an authority on public health matters. On Friday the regular program of the society will be completed.

Arrangements are being made by the Shawnee County society for the entertainment of visiting physicians, and nothing will be left undone that will add to the comfort, the pleasure, or the benefit of those who attend.

We hope to be able to give a list of those who will take part in the Thursday pro-

gram in the next number of the JOURNAL, but we are prepared now to promise that you have never had a better treat than that in store for you at the semi-centennial meeting at Topeka next May.

A letter has been received from Dr. Crile accepting the invitation extended him, and promising to be here on May 4. While writing this notice a copy of a letter from Dr. Albee has been received stating that he would also be here on that date, and that he would select as his topic, "Recent Advances in Plastic Bone Surgery," illustrated by lantern.

It would be treat enough for the average man to be able to hear two such men as Crile and Albee in one day, but we will have other good things in store for those who come to this meeting.

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### Tuberculosis.

When all the literature that has even been published on the subject of tuberculosis has been carefully compiled, it will be found that its bulk is vastly out of proportion to the facts related. But occasional reassemblages of facts and their consideration from different points of view may disclose the direction in which more careful observation might be profitable, or the lines upon which some definite research might promise results.

An article on the "Epidemiology of Tuberculosis" by F. C. Smith, M. D. Surg. U. S. P. H. S. (Jour. A. M. A., Jan. 8) presents an excellent resume of the established data upon this disease. He calls attention to its great antiquity and suggests that there are reasons for believing that man and the tubercle bacillus are slowly approaching a biologic adjustment such as exists with the colon bacillus. He refers to the early errors in regard to the effects of climate in causing immunity, and to the more recent opinion that the so-called "immune zones" are simply uninfected territory. Given the same social conditions and infection, and these sections of country



would no longer be immune.

Although the tubercle bacillus is destroyed by heat and light, its resistance to these agents, in both its dry and moist state, has, he thinks, been underestimated. The freshly shed bacilli in moist spray are particularly virulent. Infection may occur by inhalation or by ingestion of the bacilli, but it is generally conceded that a smaller dose is required by the inhalation method. The majority of infections occur before the age of 12, and when social conditions are particularly favorable a universal infection occurs. He cites the opinions of Baldwin, Brown and Bernard, who believe that adults are not very susceptible to infection because they are vaccinated against tuberculosis by inoculation in early life. While tuberculous infection is conceded to be practically universal, among adults it causes disease only under those conditions which exhaust vitality and drain the physical resources. He then discusses in more extended detail the influence of age, occupation, habits and economic states, in the causation of disease in those who have been infected in early life.

The statement made by Dr. Smith in his paper, that a majority of all persons are infected before the age of 12, is no doubt based upon the fact that the almost constant presence of tuberculous lesions—healed or latent—in non-tuberculous adults has been demonstrated. There is a rapidly increasing tendency to accept the views of von Behring and others that the primary infection usually occurs in children, and rarely in adults. One may presume, then, that in those adults who develop the disease, there has been an increase in virulence in the latent infection, or that an immunity which has protected the individual for so many years has been lost. The latter catastrophe may be more readily explained by the occurrence of those conditions which exhaust vitality. Pathologists have advanced the view that at least a partial immunity to tuberculosis is manifested in the anatomic peculiarities of pulmonary phthisis. There must, of course, be varying degrees of immunity, and there

sometimes occurs to the clinician the question if there are not also varying degrees of virulence in tubercle bacilli, or possibly a variety of strains.

Every practitioner will meet with cases which seem to contradict the theory of primary infection in childhood, cases in which the evidence of direct infection seems conclusive, and cases in which there are, at least, no clinical evidences of immunity. Such cases, however, do not disprove the theory, nor does the occurrence of a primary infection in childhood with the establishment of a degree of immunity, preclude the occurrence of a subsequent and more virulent infection against which the established immunity is inadequate.

At this stage of our knowledge of the lines and methods of infection, it would be unprofitable to underestimate the dangers of infection in adults. Accepting the theory that the general immunity against tuberculosis is a result of vaccination in childhood, it is hardly to be conceded that such vaccination is as general as immunity seems to be. If immunity depends upon such early vaccination, those who have not been exposed to tuberculous infection during childhood must be considered as a susceptible class. But according to the statistics recently reported by Wallgren, more cases of pulmonary disease occurred in those who showed a history of exposure to infection in childhood than in those who did not. He found that in a hundred consumptives fifty-one gave evidence of childhood exposure. In a hundred healthy people there were thirteen who gave histories of such early exposure. While these statistics are subject to various interpretations, they tend to establish the theory of a natural immunity rather than an immunity acquired from early infection.

These statistics of Wallgren, however, were intended to show the effect of exposure in childhood in the occurrence of tuberculosis in the adult, and for this purpose they seem to be convincing. And this is a matter of vast importance. If it can be definitely shown that primary childhood infection is essential to the development of



tuberculous disease in adults, one of the greatest problems of the ages will be near its solution.

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### Pneumonia in Children.

Pisek and Pease, in a report of their studies of the epidemiology of pneumonia in children (Amer. Jour. Med. Sc.), establish a mortality rate for pneumonia of 34.3 per cent. This conclusion is based on a study of a thousand cases.

Bronchopneumonia is pre-eminently a disease of the first two years of life, they say, and after the third year is relatively uncommon. Lobar pneumonia occurs after the third year in practically all cases except those that are secondary to some other disease, or when pneumonia occurs as a terminal condition. Lobar pneumonia also frequently occurs during the first and second years.

They conclude that the infection which is the etiologic factor of lobar pneumonia is always the pneumococcus, while a bronchopneumonia may be due to a number of organisms, such as the streptococcus or the influenza bacillus, occurring alone or as a mixed infection. If pneumococci are present in bronchopneumonia, they are usually one of a group of various organisms, or at least are of low virulence, and resemble the organisms commonly found in the mouth.

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### Open Air Treatment of Pneumonia in Children.

Freeman, in a discussion of the open-air treatment of pneumonia and anemia in children (Amer. Jour. Med. Sc.), states that the method of treating these cases in the Roosevelt hospital has been to give them an initial dose of castor oil, put them to bed on the roof, keep their extremities warm and their bowels open. Stimulants and expectorants are rarely required. When the cough was troublesome a dilute solution of tincture of chloride of iron in glycerine or water was used.

Out of twenty-five cases of lobar pneumonia treated there, three died, giving a

mortality of twelve per cent. Of sixty-two cases of bronchopneumonia, sixteen died, giving a mortality of twenty-one per cent. There were twenty-one cases of uncomplicated lobar pneumonia with one death, or a mortality of 4.7 per cent. There were thirty-one cases of uncomplicated bronchopneumonia with only one death, or a mortality of 3.3 per cent. When compared with the mortality statistics from other hospitals, and with the mortality rates given by Osler and by Holt, the advantages of the open-air treatment seem to be conclusively shown.

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### Quinine Hydrochloride as an Antiseptic.

Kenneth (Brit. Med. Jour.) reports his experience upon an extensive clinical use of quinine hydrochloride in the dressing of infected wounds. It was used in one per cent solutions for wet dressings and in one-tenth per cent solutions for irrigation. One per cent solutions were also used for instillations and hypodermic injections about the wound. The treatment seemed effective in getting rid of the *Bacillus aerogenes capsulatus*. It seems to inhibit bacterial growth. It acts as an antiferment and, to some extent, as an antipyretic. The one per cent solution is prepared with cold boiled water. The one-tenth per cent solution is prepared with one-tenth per cent of hydrochloric acid or one per cent alcohol.

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### Influenza.

The members of the profession as well as the people have been satisfied to regard the prevailing epidemic of respiratory infections as one of influenza. No extended effort has been made to determine its bacteriology, but in such investigations as have been made, the *B. influenza* and the *Micrococcus catarrhalis* have not been found. Mathers (Jour. A. M. A., Jan. 1) reports the results of his examination of the sputum, nasal discharge and pharyngeal mucosa in twenty-four cases. Cultures were made from the secretion in these cases, and in seventeen instances a hemolytic streptococcus was found to be the predominating organism.

The Wyandotte County society is a live one. We presume there are occasional discords among the members as is the case everywhere, but they do not bring these things into the society, and they do not permit them to interfere with the purposes of the organization.

They are an enthusiastic lot of men who know how to entertain themselves as well as others. They invited the Council and officers of the State Society to attend their annual banquet, and they put on a very original and amusing stunt, in the nature of a mock trial, a suit for damages for injuries received in an automobile accident. It was exceedingly well done. The striking thing about it was that the members all seemed to enjoy it fully as well as the visitors. There were no grouches or soreheads there, or if there were they forgot about it.

—R—

Dr. Van Duzer, the A. M. A. organizer, is now working in the northeast portion of the state. Dr. Van Duzer has been doing some excellent work. Besides getting new members into the state organization, it is a part of his work to stimulate an interest in society work and to bring harmony among those where discord exists. Up to this date Dr. Van Duzer has secured more than seventy applications for membership in the State Society through the various county organizations.

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It seems from inquiries received from some of our readers, that a certain Frank J. Kellog, or some one operating under his name, for he is now dead, who is doing a mail order or patent medicine business with headquarters at Battle Creek, has been mistaken for Dr. J. H. Kellog, the superintendent of Battle Creek Sanitarium. Dr. J. H. Kellog is a man of the very highest professional standing, and the institution with which he is connected is strictly ethical in all its methods. No institution with the reputation of Battle Creek Sanitarium would tolerate such practices by any of its employees.

A pamphlet on the "F. J. Kellog Frauds" was issued by the A. M. A. some time ago.

### Meeting of the Council.

The regular January meeting of the Council was held at the Grund Hotel in Kansas City, January 18. The meeting was called at 5 o'clock. The following officers and members of the Council were present: Dr. O. D. Walker, president; Dr. Chas. S. Muffman, secretary; Dr. C. W. Reynolds, first district; Dr. C. C. Goddard, second district; Dr. H. B. Caffey, third district; Dr. O. P. Davis, fourth district; Dr. W. E. Currie, fifth district; Dr. C. S. Kenney, ninth district; Dr. D. R. Stoner, tenth district; Dr. J. A. Dillon, eleventh district; Dr. W. F. Fee, twelfth district.

Communications were read from Dr. W. L. Rodman, president of the American Medical Association, in reference to plans for increasing the strength and efficiency of the reserve medical corps of the army. The following resolutions, adopted by the Southern Medical Association, at Dallas, Tex., November 8-11, 1915, were read and endorsed:

WHEREAS, The President and the Honorable Secretary of War have announced in the public press that a scheme for the reorganization of the army will be presented to Congress at its coming session, which will materially increase the military establishment; and

WHEREAS, We recall the indignant protests and criticisms of the nation at the failure to provide adequately for the sick and wounded at the beginning of the Civil War and the Spanish-American War; and

WHEREAS, It is known that this failure was due to the lack of a sufficient number of medical officers in the regular army and a means for increasing the medical establishment at the outbreak of war; and

WHEREAS, In spite of the lessons of the Spanish-American War which were fresh in mind in the reorganization of the army in 1901, the medical department was not properly increased and no provision was made for its expansion in time of emergency; and

WHEREAS, To correct the defects in the 1901 legislation, subsequent legislation was necessary in which the medical profession



of the United States was called on to assist; therefore, be it

*Resolved*, By the Southern Medical Association, in session at Dallas, Texas, that the Secretary of War be petitioned to make adequate provision in the reorganization of the army about to be presented to Congress for a sufficient number of medical officers for the regular establishment, which provision should aggregate a proportion of medical officers of, at least, seventy-five hundredths of one per cent of the enlisted strength of the army, or such number as the Surgeon-General of the army may deem necessary; and be it further

*Resolved*, That the Secretary be petitioned to make provision in this reorganization for the expansion of the medical department at the beginning of war, by calling into service in the medical reserve corps physicians from civil life who have been instructed in their special duties as medical officers in our summer camps, and otherwise as the War Department may see fit.

The following resolution, which was prepared by Dr. Goddard, was unanimously adopted, and the secretary was instructed to forward a copy to Dr. Rodman:

To the President of the American Medical Association:

WHEREAS, It has come to the knowledge of the State Medical Society of Kansas, that a hearing will be given by the President and Military Committee of the House of Representatives, on January 24, 1916, looking toward the reorganization of the army about to be presented to Congress, and present the reasons why an increase should be made in the number of medical officers for the regular establishment; therefore, be it

*Resolved*, That we, the Council of the Kansas Medical Society, do heartily second the movement and sincerely recommend its favorable consideration; and be it further

*Resolved*, That the Council of the Kansas Medical Society wishes to assure the president of the American Medical Association of our hearty co-operation.

O. D. WALKER, President.

CHAS. S. HUFFMAN, Secretary.

Dr. Davis, on behalf of the Committee on Arrangements for the semi-centennial meeting to be held at Topeka, requested that a three days' meeting be arranged for, and that the second day be set aside for clinics and addresses by medical celebrities. The request was granted and the secretary was instructed to invite several medical men of prominence to take part in this program.

The president reported that he had requested Dr. Sawtell to represent the Society at the Conference on Education to be held in Chicako in February.

The following report by the editor was read and received and ordered published in the JOURNAL:

January 18, 1916.

To the Council of the Kansas Medical Society:

The editor of the JOURNAL of the Kansas Medical Society has the honor to report as follows:

From January 1, 1915, at which time the JOURNAL was enlarged and changed in style and make-up, the receipts from all sources, including \$600 from the treasurer, were.....\$2,823.33  
Cost of publication for same period, including salary of editor ..... 2,216.13

Balance. . . . . \$ 607.20

From May 1, 1914, when the fiscal year began, to January 1, 1915, the receipts fell considerably short of the expenses, and the increased income after January 1 barely offset that deficiency, so that our report as of May 1, 1915, showed a balance of only \$16.04.

From May 1, 1915, to January 1, 1916, the amount received from all sources is.....\$1,956.30  
Cost of publication for same period, including salary of editor ..... 1,512.13

Balance. . . . . \$ 446.17



It is reasonable to conclude from these figures that the balance on hand at the end of the fiscal year will more than equal the amount the Society has contributed, and that the JOURNAL will at least have cost it nothing.

During the year the editor has sent out a large number of circular letters to non-members of the Society, soliciting members and subscribers. The immediate returns from these letters have, perhaps, not equaled the expense, but the ultimate returns will, do doubt, justify the effort and the outlay. The expense of these letters has been charged to the publication account of the JOURNAL, and is included in the figures presented. In addition to the letters and circulars, a large number of sample copies have been mailed, and as only a limited number of sample copies may be sent at pound rates, they were sent under stamp, which added considerably to the expense.

Beginning with the January number, a bureau of information has been established in connection with the Co-operative Advertising Bureau. While this department will add materially to the value of the JOURNAL, to the members of the Society, and also to its value as an advertising medium, there is no doubt that it will also add something to the work required of the editor. Still other service departments are under consideration, and will be developed as rapidly as time permits.

The editor has endeavored to maintain an editorial policy in accordance with the wishes of the Council as stated to him and as he has understood them. The only criticism which has come to him along this line was in regard to the attitude of the JOURNAL on the subject of fee-splitting. While this criticism was based upon an article in the JOURNAL—a review of a book written by Dr. Robert Morris—the editors of the papers publishing the criticisms had neither of them read the article. They admitted their remarks were based upon information furnished by a "friend." I submit herewith some correspondence in regard to this matter for the benefit of

those who may be in doubt. The review of the book was written at the solicitation of its author, who expressly stated that he preferred criticism to compliments. There was no intention on the part of the editor to defend fee-splitting. The "friend" who furnished the information upon which the newspaper articles were written also sent clippings from these papers to the officers of the Society, members of the Council, officers of the A. M. A. and to other publications, apparently with the object of placing the editor of the JOURNAL in a false light.

All of which is respectfully submitted,  
W. E. McVEY, Editor.

Dr. W. E. McVey was unanimously elected editor for the year ending May, 1917.

The Council then adjourned.

————— R —————

### In Memoriam

We regret to learn of the death, from bronchopneumonia, of the wife of Dr. R. J. Miller, of Blaine, Kan. Mrs. Miller was in good health and spirits thirty-six hours before her death. She was a young woman, and had been married only about one year.

Returning to his office after making a call, on February 2, Dr. William B. Campbell, of Troy, Kan., died suddenly. He was found in his office shortly after his death. Dr. Campbell was a member of the Kansas Medical Society and president of the Doniphan County society. He graduated from the Medical Department of the University of Michigan in 1881, and located in Troy in 1882. He leaves a wife and a married daughter.

We have just received word of the death of the father of Dr. C. J. McGee, of Leavenworth. James McGee died in Leavenworth on December 28 after a short illness with bronchopneumonia. He was born in Ireland in 1833, and came to this country when quite a young man. He first located in Cincinnati, and was sent west by the Phoenix Insurance Company. He

located in Leavenworth, where he had the management of the company's business for the states of Missouri, Kansas and Nebraska. He is survived by three children, Dr. C. J. McGee, John McGee and Miss Lettie McGee.

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Notice has been received of the death of Dr. A. J. Weaver, of Concordia, Kan. Dr. Weaver died on January 27 after a few days' illness. He had practiced in Concordia for twenty years, and had for several years devoted himself to surgery. He was a member of the Kansas Medical Society, and at the last meeting read a paper on "Appendicitis Complicating Pregnancy; Labor and the Puerperium," which was published in the December number of the JOURNAL. He was 48 years old at the time of his death. He leaves a wife and five children.

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Dr. Victor C. Chrane, of Logan, Kan., died in a hospital at Concordia, Kan., on December 19, 1915. On December 9, while treating a felon for a patient, he accidentally cut his finger. Septicemia developed, and the infection spread so rapidly that he was taken to the hospital on December 12, so he could receive better care.

Dr. Chrane was born September 8, 1880, in Salisbury, Mo. He graduated from St. Louis University in 1909, and immediately located in Logan. He was a member of the A.M.A., the Kansas Medical Society, and the Decatur-Norton society.

In the death of Dr. Chrane the community loses a most worthy citizen, and the medical profession a very capable physician.

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## SOCIETY NOTES.

### MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The twenty-eighth semi-annual meeting of this society will be held in the city of St. Joseph, Mo., on Thursday and Friday, March 23 and 24, under the presidency of Dr. John P. Lord, of Omaha, Neb.

The arrangements for the meeting are in the hands of a capable committee of which Dr. Floyd H. Spencer is chairman, and the

Buchanan County Medical Society will be the host. A number of surprises are in store for those who attend.

The scientific program will comprise twenty-five papers and two orations by men prominent in the profession.

Invitations have been extended to the presidents of all the state societies within our province as well as to representatives of the United States Public Health Service.

Hotel Robidoux will be headquarters and the sessions will be held in this hotel, as well as the banquet on Thursday evening at 6 o'clock. Room reservations should be made at once. Rates \$1.50 upward, European plan.

If you are not a member of this progressive society, consider this an invitation to join. Mail your application to the secretary and then be sure to come in person. You will enjoy intercourse with the members of our society where scientific progress and good fellowship are the prevailing features.

The program will be issued early in March. Should you fail to receive a copy notify the secretary.

A cordial invitation is extended to the profession of nearby states.

CHARLES WOOD FASSETT, Secretary.

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### BOURBON COUNTY SOCIETY.

Bourbon County Medical Society held their first regular meeting subsequent to the annual meeting on January 17, 1916, at Fort Scott.

At the annual meeting the following officers were elected for the ensuing year:

President, John D. Hunter, Fort Scott, Kan.

Vice-President, R. J. Whitfield, Fort Scott, Kan.

Secretary, John C. Lardner, Fort Scott, Kan.

Treasurer, W. S. McDonald, Fort Scott, Kan.

Censors—Three-year term, C. F. Har-rar, Fort Scott, Kan.; two-year term, R. Aikman, Fort Scott, Kan.; one-year term, John D. Hunter, Fort Scott, Kan.

Representative to State Society, M. F.

Jarrett, Fort Scott, Kan.

Alternate to State Society, J. F. Holeman, Garland, Kan.

Doctor Hopper, a member of our society who is taking special work in eye, ear, nose and throat, at Tulane University, contributed a paper on Clinics at that institution. The doctor advises that New Orleans is a good place to study but a poor place to practice medicine should one desire more than an existence for his labor. He knows of but one doctor at New Orleans that is wealthy and he made his money dealing in cotton futures.

Twilight sleep—so-called—was discussed by doctors present and scopolamin condemned in all stages of labor unless the physician remained at the bedside of the patient.

Adenoids and their recurrence were discussed. It was brought out in the discussion that their recurrence is not unusual and as their removal is such a simple operation, it should be repeated whenever necessary.

Doctors Payne and Newman were appointed reporters on medical and surgical topics and are to report at each meeting anything of interest that comes to their notice. All members are privileged to discuss their reports.

A training school for nurses has been established at Mercy Hospital, this city. They are qualified to look after a class of ten students. The full number is already enrolled.

A pathological laboratory fully equipped to do all work in that line is to be installed by Doctors Newman and Young in this city the first of next month. Dr. Young is to devote his entire time to laboratory and X-ray work. The laboratory is at the service of all physicians of Fort Scott and vicinity.

A feature of the regular meetings of our society, inaugurated by the president, is a smoker following the regular order of business. A free lance discussion of topics of interest to the members present, with cigars and other refreshments, furnish the entertainment—no “cabaret stunts.”

JOHN C. LARDNER, Secretary.

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#### SOUTHWEST KANSAS SOCIETY.

The Southwest Kansas Medical Society met in regular quarterly session at Liberal, Kansas, Saturday evening, January 15. Bad weather and poor train connections prevented a large attendance. The following officers were elected for the ensuing year: Dr. G. A. Nickelson, Plains, president; Dr. A. L. Knisely, Liberal, vice-president; Thos. L. Higginbotham, secretary-treasurer.

After a general discussion of medical topics the meeting adjourned till the first week in April, unless called in special session by the president.

Dr. C. B. Leslie, of Meade, is spending the winter in California.

Dr. A. L. Knisely, Liberal, attended the Mayo clinics in the early part of January.

Dr. Davies, Kansas City, Mo., is attending to Dr. Leslie's practice.

Dr. Wm. F. Fee, of Meade, has had a recurrence of an antrum infection, causing him to be absent from practice for a few days.

Dr. T. A. Jones has plans made to double the capacity of the Liberal Hospital, putting it in the 25-bed class.

Dr. R. T. Nichols, Manhattan, attended to Dr. Knisely's practice while the doctor was at Rochester, Minn.

Dr. Geo. S. Smith, Liberal, spent the third week of January in Kansas City, Mo.

Dr. T. L. Higginbotham has moved his family to Hutchinson, making headquarters at that place, with offices in the First National Bank building.

Dr. Ralph Hertzler, of Newton, was at Liberal and Meade, January 17-19, making fraternal insurance examinations.

Dr. A. E. Hertzler, Kansas City, was in Liberal, January 21, on professional business.

Fraternally,

THOS. L. HIGGINBOTHAM, Sec'y.

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#### DOUGLAS COUNTY SOCIETY.

The Douglas County Medical Society met in regular session on January 10, and



elected the following officers for 1916: E. J. Blair, president; E. R. Keith, vice-president; Carl Phillips, secretary; W. C. McConnell, treasurer.

E. J. BLAIR, Secretary.

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#### MORRIS COUNTY SOCIETY.

On account of the cold weather, bad roads, and the grip, the January meeting of our society was called off.

Our next meeting will be held in Dr. B. E. Miller's office in Council Grove on February 21. Papers will be read by Dr. B. E. Miller and Dr. C. A. Yearout of Dunlap.

ALBERT BEAM, Secretary.

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#### WYANDOTTE COUNTY SOCIETY.

The regular monthly meeting of the Wyandotte County Medical Society was held in the Mercantile Club Rooms at Kansas City, Tuesday evening, February 1, at 8 o'clock. The program was as follows: Medical Clinic, Dr. P. T. Bohan. Discussion opened by Dr. L. A. Lynch.

E. A. REEVES, Secretary.

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#### LYON COUNTY SOCIETY.

At the regular annual meeting of the Lyon County Medical Society in December the following officers were elected: President, A. W. Corbett; vice-president, F. W. White; secretary and treasurer, F. A. Eckdall.

At the February meeting Dr. F. W. White presented a very able paper on the subject of "Pneumonia in Children." It was a rousing meeting and every one joined in the discussion and many valuable points of information were brought out.

We have in our society both eclectics and homeopaths, besides the regulars. At our meetings we all come together for the mutual benefit of all members of the society and the community in general.

F. J. ECKDALL, Secretary.

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#### KINGMAN COUNTY SOCIETY.

The following officers of the Kingman County Medical Society were elected at a

meeting held January 10, 1916: President, Dr. J. W. Light, Kingman; vice-president, Dr. H. E. Haskins, Kingman; secretary, Dr. C. W. Longenecker, Kingman; treasurer, Dr. C. E. Phillips, Zenda.

C. W. LONGNECKER, Secretary.

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#### COFFEY COUNTY SOCIETY.

The Coffey County Medical Society met in regular session at the Rex hotel in Burlington, February 4. After the usual banquet the regular business of the society was transacted. Two papers were presented; one on "Diabetes" by Dr. F. C. Boggs, and one on "Pyorrhœa" by Dr. Woods. The guests were the officers and chairman of committee of the Burlington Commercial Club. The subject under discussion with the guests was a hospital in Burlington.

The next Meeting will be held at Waverly in May, after the meeting of the State Society.

C. C. CULVER, M.D.,

Secretary.

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### BOOKS.

#### Bone-Graft Surgery.

By Fred H. Albee, M.D., F.A.C.S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo volume of 417 pages with 332 illustrations, three of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6 net; half morocco, \$7.50 net.

It is quite appropriate that one of the men who has done so much in the development and perfection of bone surgery should write a book on this subject. Every man who pretends to do any surgery of this kind will welcome this book. The author's electrical motor operating outfit has made possible the accomplishment of many things in bone surgery, and he has described in detail the instruments and the technique of their usage.

He discusses the use of bone grafts in the treatment of Pott's Disease and other lesions of the spine, and its usage in the treatment of diseases and deformities of the foot and leg. He gives considerable space to the description of the usage of inlay bone grafts in the operative treatment of fractures, in the fixation of tuberculous hip joints, in infantile paralysis and in osteoarthropathy.

He gives a description of the wedge graft and its usage in habitual dislocation of the patella, and of the miscellaneous surgical uses of bone grafts in general. The book is very finely illustrated so that the various procedures can be easily understood.

It is the last word in bone graft surgery written by the man who is most competent to speak it.

#### Practical Cystoscopy.

SECOND EDITION, REVISED AND ENLARGED.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder. By Paul M. Pilcher, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Second edition thoroughly revised and enlarged. Octavo of 504 pages, with 299 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6 net; half morocco, \$7.50.

In the second edition of his book the author has endeavored to bring it up to date. An entire new section on Pyelography has been added, detailing the indications for its use, its technic, the diagnostic value, value of radiographic studies of the ureter and kidney, and the accidents and dangers of pyelography.

The technic of the Harris Method of Diagnosis has been included in the discussion of pathologic conditions of the ureter.

Special consideration is given to deductive diagnosis based upon the combined evidence of the cystoscope, the radiograph and improved laboratory methods. Both the general and special therapeutic uses of the cystoscope are described with the various surgical procedures that may be carried out with the newer types of operating cystoscopes, and the special instruments devised for the purpose.

Considerable space is given to the consideration of the high frequency current as used in the bladder and a description of the equipment necessary and the technic of its use. A considerable part of the text has been rewritten.

#### Post-Mortem Examinations.

By William S. Wadsworth, M.D., Coroner's Physician of Philadelphia. Octavo volume of 598 pages with 304 original illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6 net; half morocco, \$7.50 net.

"It is not uncommon for persons to overestimate their preparedness to understand and carry out a post-mortem." Such is the modest state of Dr. Wadsworth, and one may add that it is uncommon to find one whose preparedness to understand and carry out a post-mortem justifies the confidence placed in him. There are times when it is very important that the man who does a post-mortem shall be able to determine, without any doubts, whether the organs he examines are normal or pathologic.

Dr. Wadsworth has prepared an exhaustive treatise on post-mortems, beginning with the preliminaries required, a chapter is then devoted to the phenomena of death. This is followed by a description of the mortuaries and the instruments required for a post-mortem. The rest of the book of 600 pages is devoted to the examination of the body and every step of the procedure is carefully described with specific consideration of every detail that should be noted and its bearing upon the ultimate findings.

Having devoted sixteen years to the work, with an observation of over 4,000 post-mortems, the author of this book should certainly be reckoned an authority on the subject.

#### The Medical Clinics of Chicago.

Vol. I, No. IV (Jan., 1916). Octavo of 220 pages. Well illustrated. Philadelphia and London: W. B. Saunders Company. Price per year, paper, \$8; cloth, \$12.

The January number of The Medical Clinics of Chicago contains a contribution by Dr. George H. Weaver on "The Schick Reaction" and eight clinics. Dr. Frederick Tice, Cook County Hospital: Epidemic Cerebrospinal Meningitis, Case of Bilateral Tuberculosis associated with Pick's Cirrhosis, Acute Endocarditis with Complicating Meningitis. Dr. Walter W. Hamburger, Cook County Hospital: Primary Carcinoma of the Liver. Dr. C. L. Mix, Mercy Hospital: Upper Lobe Pneumonia, Symptoms Due to Adhesions Following an Old Appendicitis. Dr. Ralph C. Hamill, Cook County Hospital: Tic Douloureux, a Con-



dition Resembling Landry's Paralysis in a Syphilitic. Dr. C. S. Williams, Cook County Hospital: Three Cases of Malaria, Hemorrhagic Pleurisy, Trichinosis. Dr. Robert B. Preble, St. Luke's Hospital: Pleurisy with Effusion, Unilateral Edema with Pleural and Abdominal Effusion Due to Fulminating Ovarian Cyst. Dr. Maurice L. Goodkind, Michael Reese Hospital: A Fulminating Cerebrospinal Meningitis Due to Pneumococcus, Aplastic Pernicious Anemia, Primary Adenocarcinoma of Mediastinum. Dr. Isaac A. Abt, Michael Reese Hospital: Infantile La Grippe.

#### The Practical Medicine Series.

Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Price of series, \$10. The Year Book Publishing Co., 327 So. LaSalle St., Chicago, Ill.

#### Volume X—Nervous and Mental Diseases.

Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Polyclinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School, ex-President Chicago Neurological Society. Peter Hassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Price, \$1.35.

#### Volume IX—Skin and Venereal Diseases.

Edited by Oliver S. Ormsby, M.D., Professor and Dean of the Department of Skin and Venereal Diseases, Rush Medical College, with the collaboration of James Herbert Mitchell, M.D., Research Fellow of Pathology, Rush Medical College. Miscellaneous Topics, edited by Harold N. Moyer, M.D. Price, \$1.35.

These are volumes of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume being complete on the subject of which it treats for the year prior to its publication.

#### Nitro by Hypo.

Written by E. P. Haworth, superintendent of The Willows Maternity Sanitarium, Kansas City, Mo. A 12-mo of 128 pages, bound in gray silk-finish cloth. Published by The Willows Magazine Co., Kansas City, Mo. Price, \$1.

The book is made up mostly of paragraphs and short articles which have appeared at various times in the Willows Magazine. The author says in his preface: "Perhaps some suggestion from this book will cheer a depressed and dispirited practitioner on to greater study or to serious experimentation that will save some human life, in which case it will have filled its

mission."

For the many things kindly thought and pleasingly expressed in regard to the practitioner and his work, we commend this little book.

## MISCELLANEOUS.

### DEFINES DIABETIC FOODS.

#### U. S. Department of Agriculture Issues Decision on Gluten Products and Diabetic Food.

Food Inspection Decision No. 160, recently issued by the United States Department of Agriculture, the Association of officials of the department in enforcing the Food and Drugs Act, fixes a definite limit to the amount of starch and sugar that may be present in certain gluten products and diabetic foods, and also fixes the amount of nitrogen that must be present in certain of these products, and makes requirements as to moisture and other constituents. The decision covers ground gluten, gluten flour, self-rising gluten flour, and "diabetic" foods. The definitions and standards as stated in the Food Inspection Decision were recommended by the Joint Committee on Definitions and Standards, consisting of representatives of the United States Department of Agriculture, the Association of American Dairy, Food, and Drug Officials, and the Association of Agricultural Chemists. These two associations have already adopted the definitions and standards.

Investigations by the officials in charge of the enforcement of the Food and Drugs Act have shown that various food products have been placed on the market from time to time that are recommended by the manufacturers for use by people suffering from diabetes. It is generally held that the foods best suited to persons suffering from diabetes are those which contain little or no starch and sugar. Some of the foods placed on the market are recommended by the manufacturers for use in diabetes have been found to contain nearly as much starch and sugar as ordinary products, so that they were of no more value in the treatment of



diabetes than ordinary food products that could be purchased more cheaply. The diabetic patient can avoid ordinary food products that contain considerable quantities of starch and sugar, as the composition of these products are generally known. In the case of prepared foods advertised for use in diabetes, however, the patient may be misled into eating quantities of starch and sugar that might be positively injurious.

Hereafter such products should meet the requirements of Food Inspection Decision No. 160, which are as follows:

*Ground gluten* is the clean, sound product made from wheat flour by the almost complete removal of starch and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than fourteen and two-tenths per cent (14.2%) of nitrogen, not more than fifteen per cent (15%) of nitrogen-free extract (using the protein factor 5.7), and not more than five and five-tenths per cent (5.5%) of starch (as determined by the diastase method).

*Gluten flour* is the clean, sound product made from wheat flour by the removal of a large part of the starch and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than seven and one-tenth per cent (7.1%) of nitrogen, not more than fifty-six per cent (56%) of nitrogen-free extract (using the protein factor 5.7), and not more than forty-four per cent (44%) of starch (as determined by the diastase method).

*Gluten flour*, self-raising, is a gluten flour containing not more than ten per cent (10%) of moisture, and leavening agents with or without salt.

*"Diabetic" food.* Although most foods may be suitable under certain conditions for the use of persons suffering from diabetes, the term "diabetic" as applied to food indicates a considerable lessening of the carbohydrates found in ordinary products of the same class, and this belief is fostered by many manufacturers on their labels and in their advertising literature.

A "diabetic" food contains not more than half as much glyco-genic carbohydrates as the normal food of the same class. Any statement on the label which gives the impression that any single food in unlimited quantity is suitable for the diabetic patient is false and misleading.

The foregoing definitions and standards are adopted as a guide for the officials of this department in enforcing the Food and Drugs Act.

### ————— R ————— Typhoid Fever Reduced in Rural Communities.

Reduction of typhoid fever and improvement in sanitary conditions have followed the intensive investigations of rural communities carried on by the United States Public Health Service in co-operation with local and state health officers, according to the annual report of the surgeon general of that service. During the past fiscal year 16,369 rural homes in eight different states were visited and many of them revisited. In each of these homes information was obtained as to the prevalence of disease and insanitary conditions and a complete sanitary survey of the premises conducted. This was followed by reinspections to determine if remedial measures had been instituted. In but a relatively small percentage of the cases did the persons concerned, after having their attention drawn to the danger of a particular unhygienic condition, fail to inaugurate corrective measures. Stimulus was given to the work by means of public lectures, the formation of active sanitary organizations, and the enlisting of all public spirited citizens in the campaigns for reform. Public buildings were also inspected and local authorities given expert advice in solving such sanitary problems as the disposal of excreta, the prevention of soil pollution, and the maintenance of pure water supplies.

The surveys made during the year 1914 had shown that in rural communities less than one per cent of the homes had sanitary toilets and that more than fifty per cent of the people were using water from polluted sources. This condition, according

to the Public Health Service, made the rural sanitation question loom large among the matters vital affecting the welfare of the nation. Following these studies and as a result of the interest aroused, the typhoid fever rate, an excellent indicator of the sanitary status of a community, has in some places frequently been cut to one-quarter of its previous figure. In Berkeley County, West Virginia, the cases of typhoid fever were reduced from 249 to 40 in one year. In Orange County, North Carolina, the rural sanitation campaign resulted in a reduction of the cases from 59 to 17.

The tangible results of operations in rural sanitation indicate that marked advancement in maintaining hygienic and satisfactory surroundings in country districts is possible by the application of the common principles of preventive medicine. Insanitary conditions exist largely because they are not known to be such. Actual demonstrations of their harmfulness, together with definite recommendations for their correction, remain one of the most gratifying and successful methods for instituting reforms and has been, in the experience of the Public Health Service, invariably accompanied by definite and measureable results.

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### New and Nonofficial Remedies.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Euresol pro Capillis.—Euresol (see New and Nonofficial Remedies, 1915, p. 268) perfumed to render it suitable for scalp lotions. (Jour. A.M.A., Dec. 4, 1915, p. 2009.)

Pollen Extract (Pollen Vaccine).—A solution of pollen protein. It is used for the relief of prophylaxis of a common type of hay fever (pollinosis). Before using it the patient's susceptibility and tolerance should be determined. Treatment with pollen extract has seemed to give relief

in some cases.

Swan's Staphylococcus Bacterin (No. 37).—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

Swan's Streptococcus Bacterin (No. 43).—Marketed in packages of six 1 Cc. vials and in 20 Cc. vials. Swan-Myers Company, Indianapolis, Ind.

Dimazon.—Diacetylaminoazotoluene. An orange colored powder, insoluble in water but soluble in alcohol, chloroform, oils, fats and petrolatum. It does not stain the hands or cloth. It is said to be useful to promote the growth of epithelium in the treatment of burns, wounds, chronic ulcers, etc. Dimazon is marketed as follows:

Dimazon Oil.—2 per cent.

Dimazon Ointment.—2 per cent.

Dimazon Powder.—5 per cent. Heilkraft Medical Co., Boston, Mass. (Jour. A.M.A., Jan. 22, 1916, p. 275.)

Ichthalbin Tablets, 5gr.—Each tablet contains ichthalbin 5 grains.

Triferrin Tablets, 5 gr.—Each tablet contains triferrin 5 grains.

Swan's Typhoid Bacterin (No. 44) (Prophylactic).—Marketed in packages (hospital) of thirty-six vials and in packages (board of health) of seventy-two vials. Swan-Myers Co., Indianapolis, Ind. (Jour. A.M.A., Jan. 15, 1916, p. 191.)

Radio-Rem, Outfit No. 5.—An apparatus designed for the production of radioactive drinking water by the action of radium sulphate contained in terra cotta plates. It consists of two plates contained in 250 c.c. bottles; when the bottles are filled with water the two plates impart about 3.6 microcurie (10,000 Mache units) to 500 c.c. water daily. For action, uses and dosage refer to the article on radium in New and Nonofficial Remedies. Schieffelin and Co., New York. (Jour. A.M.A., Jan. 15, 1916, p. 191.)

Iodosticks (Iodine 60 per cent and Potassium Iodide 40 per cent).—Wooden sticks  $1\frac{1}{2}$  inches long, tipped with a mixture of iodine 60 per cent and potassium iodide 40 per cent. Antiseptic Supply Co., New York. (Jour. A.M.A., Dec. 18, 1915,



p. 2167.)

Iodoapplicators and Iodoapplicators, Special (Iodine 60 per cent and Potassium 40 per cent).—Wooden sticks  $6\frac{1}{2}$  and 12 inches long, respectively, tipped with a mixture of iodine 60 per cent and potassium iodide 40 per cent. Antiseptic Supply Co., New York. (Jour. A.M.A., Dec. 18, 1915, p. 2167.)

Mercury Biniiodide Oil Solution in Ampules, H. W. and Co.—One c.c. of solution contains red mercuric iodide in a neutral fatty oil, 0.1 Gm. ( $\frac{1}{2}$  grain). Hynson, Westcott and Co., Baltimore, Md.

Calcium Phenolsulphonate, P.W.R.—A non-proprietary brand of calcium phenolsulphate admitted to New and Nonofficial Remedies. Powers-Weightman-Rossengarten Co., Philadelphia, Pa.

PARKE, DAVIS & CO., DETROIT, MICH.

Mercuriol Tablets,  $\frac{1}{4}$  gr.—Each tablet contains mercuriol 0.016 gm.

Mercuriol Tablets,  $\frac{1}{2}$  gr.—Each tablet contains mercuriol 0.03 gm.

Mercuriol Tablets, 1 gr.—Each tablet contains mercuriol 0.065 gm.

Mercuriol Tablets, 2grs.—Each tablet contains mercuriol 0.13 gm.

Mercuriol with Potassium Iodide Tablets.—Each tablet contains mercuriol  $\frac{1}{4}$  gr. and potassium iodide 1 gr.

Iodalbin and Mercuriol Tablets.—Each tablet contains iodalbin 5 grs. and mercuriol 1 gr.

H. K. MULFORD CO., PHILADELPHIA, PA.

Hay Fever Vaccine, Mulford (Autumnal).—Pollen extract prepared from ragweed. Marketed in packages of four syringes containing, respectively, 0.0025 mg., 0.005 mg., 0.01 mg. and 0.02 mg. of pollen protein. Also in separate syringes containing 0.02 mg. pollen protein. (Jour. A.M.A., Dec. 4, 1915, p. 2009.)

Diphtheria Immunity Test (Shick Test).—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be

determined which individuals should be given an immunizing dose of diphtheria antitoxin. It is also of value in the diagnosis of other conditions simulating diphtheric infections.

Diphtheria Toxin Standardized (Schick Test).—Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs of diphtheria toxin. (Jour. A.M.A., Jan. 15, 1916, p. 191.)

Ampuls Sodium Cacodylate, Mulford,  $7\frac{3}{4}$  grains.—Each ampule contains sodium cacodylate 0.5 Gm.

Ampuls Sodium Cacodylate, Mulford, 15 grains.—Each ampule contains sodium cacodylate 1 Gm.

Ampules Solution Pituitary Extract, Mulford, 0.5 Cc.—Each ampule contains solution pituitary extract 0.5 Cc. (Jour. A.M.A., Dec. 11, 1915, p. 2085.)

Scarlatina Strepto-Serobacterin, Mulford (Therapeutic), (Sensitized Scarlatinal Streptococcic Vaccine).—Marketed in packages of four syringes. (Jour. A.M.A., Dec. 18, 1915, p. 2167.)

Quinine Dihydrochloride (Quininæ Dihydrochloridum).—The dihydrochloride of the alkaloid quinine. Since quinine dihydrochloride is very soluble, its use has been proposed where concentrated solutions of quinine are wanted, as for subcutaneous injections and similar purposes.

Ampules Quinine Dihydrochloride, Mulford, 0.24 Gm.—Each ampule contains 0.24 Gm. quinine dihydrochloride in 1 Cc. of sterile solution.

Ampules Quinine Dihydrochloride, Mulford, 0.5 Gm.—Each ampule contains 0.5 Gm. quinine dihydrochloride in 1 Cc. of sterile solution. (Jour. A.M.A., Dec. 18, 1915, p. 2167.)

Purified Tricresol, Mulford.—A mixture of isomeric cresols, corresponding closely to Cresol, U.S.P. (Jour. A.M.A., Dec. 18, 1915, p. 2167.)

G. Strophanthin (Toms), Merk.—A non-proprietary brand of ouabain, crystallized.

MERCK & CO., NEW YORK.

Calcium Peroxide, Merck.—A non-proprietary brand of calcium peroxide ad-



mitted to New and Nonofficial Remedies.

Sodium Peroxide, Merck.—A non-proprietary brand of sodium peroxide admitted to New and Nonofficial Remedies.

Zinc Peroxide, Merck.—A non-proprietary brand of zinc peroxide admitted to New and Nonofficial Remedies.

Mercuric Succinimide, Merck.—A non-proprietary brand of mercuric succinimide admitted to New and Nonofficial Remedies. (Jour. A.M.A., Dec. 4, 1915, p. 2009.)

Morphine Meconate, Merck.—A non-proprietary brand of morphine meconate admitted to New and Nonofficial Remedies. (Jour. A.M.A., Dec. 4, 1915, p. 2009.)

Ethyl Salicylate, Merck.—A non-proprietary brand of ethyl salicylate admitted to New and Nonofficial Remedies.

Osmic Acid, Merck.—A non-proprietary brand of osmium tetroxide admitted to New and Nonofficial Remedies.

Sodium Oleate, Merck.—A non-proprietary brand of sodium oleate admitted to New and Nonofficial Remedies.

Thiosinamine, Merck.—A non-proprietary brand of thiosinamine admitted to New and Nonofficial Remedies.

Urea, Merck.—A non-proprietary brand of urea admitted to New and Nonofficial Remedies.

Liquid Petrolatum, Merck.—A non-proprietary brand of liquid petrolatum, U.S.P. It is made from American petroleum. It is colorless, non-fluorescent, practically odorless and tasteless. (Jour. A.M.A., Dec. 25, 1915, p. 2239.)

Iron Lactate, Merck.—A non-proprietary brand of ferrous lactate admitted to New and Nonofficial Remedies.

Sodium Phosphate, Monobasic, Merck.—A non-proprietary brand of sodium acid phosphate admitted to New and Nonofficial Remedies.

Phloridzin, Merck.—A non-proprietary brand of phloridzin admitted to New and Nonofficial Remedies.

Sulphanilic Acid, Merck.—A non-proprietary brand of sulphanilic acid admitted to New and Nonofficial Remedies.

Ergotin, Merck.—A non-proprietary brand of extract of ergot, purified, ad-

mitted to New and Nonofficial Remedies.

Antithyroidin-Moebius Tablets,  $\frac{3}{4}$  gr.—Each tablet contains antithyroidin-Moebius  $\frac{1}{4}$  gr.

Euquinine Tablets, 2 grs.—Each tablet contains euquinine 2 grains.

Euquinine Tablets, 5 grs.—Each tablet contains euquinine 5 grains.

Ferratin Tablets,  $7\frac{1}{2}$  grs.—Each tablet contains ferratin  $7\frac{1}{2}$  grains.

Stypticin Hypodermic Tablets,  $\frac{3}{4}$  grain. Each tablet contains  $\frac{3}{4}$  grains.

Stypticin Sugar-Coated Tablets,  $\frac{3}{4}$  gr.—Each tablet contains stypticin  $\frac{3}{4}$  grain.

Stypticin Dental Tablets,  $\frac{3}{4}$  gr.—Each tablet contains stypticin  $\frac{3}{4}$  grain. (Jour. A.M.A., Jan. 1, 1916, p. 31.)

Dionin Tablets,  $\frac{1}{4}$  gr.—Each tablet contains dionin  $\frac{1}{4}$  grain.

Dionin Tablets, 1 gr.—Each tablet contains dionin 1 grain.

Theophyllin Sodium Acetate Tablets, 0.15 Gm.—Each tablet contains theophyllin sodium acetate 0.15 Gm.

Triphenin Tablets, 5 gr.—Each tablet contains triphenin 5 grains.

Tubes Tropacocaine Hydrochloride, Sterilized, 1 gr.—Each tube contains tropacocaine hydrochloride, 1 grain.

Veronal-Sodium Tablets, 5 gr.—Each tablet contains veronal-sodium 5 grains.

Iodipin Tablets, 3 min.—Each tablet contains iodipin 3 minims.

Apiol-Merck.—A non-proprietary brand complying with the standards for apiol.

Creosote Carbonate-Merck.—A non-proprietary brand complying with the standards for creosote carbonate.

Phenolphthalein-Merck.—A non-proprietary brand complying with the standards for phenolphthalein.

Quinine Tannate-Merck.—A non-proprietary brand complying with the standards for quinine tannate.

Sodium Nucleinate-Merck.—A non-proprietary brand complying with the standards for sodium nucleate. (Jour. A.M.A., Jan. 8, 1916, p. 117.)

HOFFMANN-LAROCHE CHEMICAL WORKS,  
NEW YORK.

Betanaphthol Benzoate-Roche.—A non-

proprietary brand complying with the standards for betanaphthol benzoate.

Betain Hydrochloride-Roche.—A non-proprietary brand complying with the standards for betain hydrochloride. (Jour. A.M.A., Jan. 22, 1916, p. 275.)

Ergotinine Citrate-Roche.—A non-proprietary brand complying with the standards for ergotinine citrate.

Hematropine Hydrochloride-Roche. — A non-proprietary brand complying with the standards for homatropine hydrochloride.

Seiden Peptone-Roche (Silk Peptone).—A non-proprietary brand complying with the standards for silk peptone.

Theobromine and Sodium Acetate-Roche.—A non-proprietary brand complying with the standards for theobromine sodium acetate. (Jour. A.M.A., Jan. 29, 1916, p. 355.)

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### The Price of Quinin.

We in this country are inclined to feel that the scarcity of certain drugs is a local hardship. As a matter of fact, the war has produced a stringency in the drug market everywhere. Among the drugs now expensive and difficult to obtain is quinin, the exportation of which from Germany has been forbidden for several months, and on which an embargo was lately imposed by Great Britain. When the British embargo was declared on German, Dutch or Javanese quinin salts had been obtainable on the New York market for some time. American manufacturers were reported to have withdrawn from the market and to be holding their dwindling stocks and inadequate output to fill previous contracts. Such contracts were being filled at 50 cents an ounce for hundred-ounce tins; but consumers obliged to purchase on the open market, at last accounts, were paying middlemen from \$1.25 to \$1.50 an ounce for quinin sulphate, while a little earlier prices of \$2.10 and \$2.25 were quoted.

Only once or twice since the Civil War (when \$6.50 an ounce was paid in some instances—in depreciated currency to be sure) have these prices been equaled or exceeded. Between 1880 and 1884 there was

a period of high prices, due to an attempt to corner the supply of chinchona bark. Ten years ago the price quoted by domestic manufacturers was 24 cents an ounce in hundred-ounce tins. From 1910 to 1912, inclusive, it was 19 cents, but in January, 1913, and January, 1914, it was 25 and 30 cents, respectively.

Cinchona bark is produced in Java, India and Ceylon; a small amount comes from South America, and some is grown in Africa, Jamaica and a few other countries. About 80 per cent is produced in Java. The leading countries in the manufacture of quinin are Germany, France, Great Britain, Holland, Italy, the United States, Java and India. The world's market depends for cinchona bark chiefly on Java, and for quinin mainly on Germany. The United States is Germany's largest customer, besides the heaviest consumer of quinin among all the countries of the world. The effect of any disturbance in the world's supply of quinin would therefore be felt most acutely here. The war has affected the supply by causing an increased demand for quinin for the use of the armies, by interfering with the free movement in commerce of the bark and the manufactured alkaloid and salts, and in other ways, both direct and indirect.

While some of the factors in the situation were operative previously, the recent abrupt rise in the price of quinin is due chiefly to causes connected with the war. The present extremely high prices, therefore, says *The Journal of the American Medical Association*, may be temporary. Moreover, there is said to be a probability of increased output from the Amsterdam factories.

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### The Varieties of Pneumococci Causing Lobar Pneumonia.

"Although the causative organism of lobar pneumonia is definitely known, much remains to be learned," says *The Journal of the American Medical Association*, "regarding the mode of infection and the nature of the disease. With the discovery of pneumococci in the mouths of normal individuals, the belief became prevalent that pneumonia was an autogenous infection depend-



ing on a change or virulence of these mouth pneumococci, or a decrease in resistance on the part of the host. Proof of this theory is lacking, however, and evidence now at hand indicates that the strains of pneumococci causing the infection in 80 per cent of cases differ inherently from those inhabiting the mouth under normal conditions. Furthermore, it seems probable that pneumonia is a contagious disease and is acquired by contact with patients suffering from the disease, or with true pneumonia carriers.

"The common assumption that pneumonia is an autogenic infection is entirely out of accord with recent observations. Pathogenic strains are divisible into four groups by immunologic tests, and these groups do not differ in different parts of the world. Although these groups are apparently quite stable, recent South African observations suggest that new types of pathogenic organisms may develop when there is no immunity in the race or races affected."

— R —

#### **Incompatibility of Quinine with Aspirin.**

Experiments have shown that weak acids, such as acetylsalicylic acid (aspirin), citric, malic, acetic or tartaric acid under the influence of heat may convert quinine into its poisonous isomer quinotoxin and cinchona into cinchotoxin. The danger of the formation of quinotoxin in the body cannot be great. Ready-made mixtures of quinine or cinchona preparations with weak organic acids should be avoided. (Jour. A. M.A., Dec. 18, 1915, p. 2187.)

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## **THERAPEUTIC NOTES**

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More than a hundred thousand patients have received treatment at the Battle Creek Sanitarium during the fifty years of its existence. In fact, Case No. 100,000 was assigned several weeks ago to ex-President Wm. H. Taft on the occasion of his visit to Battle Creek. Mr. Taft was not sick, but took an examination while in Battle Creek just for the "fun" of it.

The list of sanitarium patients includes

men and women from every state in the Union and from almost every foreign country. Wu Ting Fang, the eminent Chinese diplomat, was at one time a guest at the sanitarium and he has recently written to the management that he expects to revisit the institution on his hundredth birthday. The diplomat believes that the system of diet which he has worked out for himself will extend his life beyond the century mark.

A general resume of the work of the sanitarium for 1914 has just been issued in the form of an annual report. It will be sent free upon request to any physician.

— R —

#### **Establishment of a Department of Hygiene, Sanitation and Epidemiology.**

The H. K. Mulford Company announces the establishment of a Department of Sanitation and Epidemiology, under the executive management of Thomas W. Jackson, M.D., expert in preventive medicine, sanitation and the study and control of epidemic diseases.

The most important subjects before the American people at the present time relate to the public health. Work in this field is frequently beyond the reach of the existing health and sanitary departments of the various municipalities and smaller towns, on account of limited appropriations.

The department does not propose to enter into competition with the constituted public health authorities, local, state or federal, but to aid and assist these authorities in every possible way. The work is essentially one of service and education, and will be developed along these lines. The resources and equipment of the Mulford Laboratories, chemical and bacteriological, will be utilized, thus placing at the disposal of the new department the entire laboratory facilities and expert services of the H. K. Mulford Company.



# THE JOURNAL

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### Every General Practitioner a Public Health Officer.

LLOYD A. CLARY, M.D., Hutchinson, Kan.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

My idea in presenting a paper with the above title is to stimulate each one of us who is doing more or less general practice to look after his cases of contagious diseases a little more carefully and see if we cannot obtain a better after-effect in more instances, and to do more work leading to a better condition of public health. The man doing general practice is the man who is brought into intimate contact with disease as found in the home and he should instruct the general public as to health matters. The opportunity presents itself repeatedly for us to tell folks what to do to improve their general condition, how to guard their health and that of their children, how to avoid infection from contagious diseases, how to live in better surroundings—in fact how to live better. It is the general practitioner who comes in contact with people first, and he is the man to whom people turn for advice on all kinds of health matters. I do not claim that he knows as much about public health or preventive medicine as does the specially trained man, but he has an opportunity to impart information that does not come to the public health official.

When there is a case of scarlet fever in a neighborhood and one of the families you are taking care of has a new baby or a fracture case or pneumonia, mumps, typhoid, or something else that you are called upon to treat, and when the mother

of such family tells you about her neighbor having a child with scarlet fever, right then and there is your opportunity to deliver a lecture on public health with scarlet fever and its prevention as the leading topic of your talk and with an attentive audience of one. This mother will pay stricter attention and will be more apt to follow out the preventive measures you suggest to her because of her fear at the time of the trouble extending to her own family than she would had she heard half a dozen health talks down at the Y.M.C.A. or in some other public place. Right then is the psychological moment; she is in a receptive mood. What you tell her is specifically applied to one particular condition. Your instructions to her are definite. No wonder, considering how much alarmed she is over the prospect of her baby coming down with this dread disease, that she pays attention to what her family physician says, tries to do what he tells her to do and to avoid that which he tells her to avoid.

My idea is that in the way outlined great results may be obtained in the betterment of public health and living conditions. Don't misunderstand me. I certainly do not mean that the family physician does not give out daily advice of immense value to his patients. He has always been the family adviser and the advice he gives is of incalculable worth. But the amount and the timeliness of such advice depends upon the individual physician and upon his ability and desire to grasp the opportunity and give such judicious advice as he sees fit. My plea is for all

of us to be alive to these opportunities to a greater extent. I believe that every one of us lets many a chance slip by in which we might have said something to our patient along the lines of public health that would have been of material value to him and that we did not say. I also believe that many times we treat a case of some contagious disease such as measles, for example, wherein we neglect to warn the mother of the dangers during convalescence and following such an attack. When that child finally comes down with pneumonia a month or so after the measles has been cured—apparently—then we go back and say: "Oh, you should have been more careful. This has been a rainy spring. You have allowed Johnnie to play out in the wet too much."

Now that mother should have been told in the very beginning of the dangers of letting her child be exposed to "colds" after the attack of measles. We all know at this time that measles is a very fatal disease. We know it is a trouble not to be trifled with. Yet too often we go in, give directions for a mild carbolic bath, have some mild spray used to keep the nostrils clean, give a prescription for an expectorant, go home and hear no more of the case and never think of it again unless it be to try to collect our pay for that visit. Of course, when the family seems to think that one visit is enough and would resent any more attention and say we were trying to "run up a bill" if we insisted on making more visits, there is some excuse for doing as above stated. But even though only one visit is made to see the case under discussion, we certainly can take a few moments right then to tell the mother how to conduct the case and how to avoid trouble later on.

Let me cite a case that actually happened in my own practice some time since. I might say to begin with that I have had the seriousness of measles so forcibly brought to my attention that possibly I dwelt on the subject more emphatically than I otherwise would have done. I came into the home and found the baby with a

measles eruption and other typical symptoms. When I pronounced it measles the mother and grandmother each let out a long sigh of relief and the grandmother said: "Well, I'm glad it's only measles. I was afraid it might be scarlet fever. We wouldn't have had a doctor at all if we had known it was only measles."

Then I lit in and said a few things. I told them something of the seriousness of measles and something of the after-effects. I asked the mother if she had ever heard any one who was "hard of hearing" say: "Yes, I had measles when I was a kid and I never have been able to hear very well since then." This mother pointed to her twelve-year-old boy and replied: "There's one right there. He can't see very good, either, since he had the measles."

Of course I hadn't looked for a nice, home-made example like that right at hand, but with such an exhibit to back me up it did not take many moments to demonstrate to her that measles really did amount to something after all. Then I proceeded to tell her that they probably would not ask me to visit the baby again unless it got worse, but I warned her that when it was up and around she should be careful of exposure. I had given a public health lecture applied to an individual case right in this little home. And in this instance I am sure it bore fruit for, even though this family did not have me return, as the baby had a mild attack, still they did pay more attention to the case than they otherwise would have done, consulted me a number of times at the office and by phone and brought the baby in so that proper treatment could be given the slight involvement of the ears that followed the attack.

I have gone into detail about this case because I believe it illustrates my point so well. It was while driving back from this call that the idea of preparing this paper came to me and I saw I had done the very thing here that this paper advocates.

Another illustration: A child four years old was brought in with the question asked, "What is the matter with him?" The child



was backward mentally and presented rather a typical picture. A diagnosis of adenoids and enlarged, diseased tonsils was made and removal advised. In examining the throat it was noticed that there were some decayed teeth. Here it would have been easy to advise removal of tonsils and adenoids and ignore the other condition. However, an important element in making for good or bad health in a child is the teeth. I advised that a dentist be consulted after this child recovered from the operation and that these cavities be filled. The mother greatly appreciated being told a few little things in that branch the dentists term "oral hygiene," and she promised to take her child to a good dentist.

We hear a good deal about "swat the fly." Now to make that health advice applicable and to get it to a housewife in such a way that she will swat and swat hard is sometimes a difficult matter. But if we will talk plainly and tell just why that fly is obnoxious, a whole lot can be accomplished. Supposing the case is a large wound and you are expecting to go to the house frequently to dress it. You notice a few flies in the bed room. The thing to do is to say to that housewife as soon as you notice the flies that you would appreciate it if she would kill off all those flies before your next visit. You can tell her that their feet are made filthy by walking around in her barn yard and that you don't want the sore or the dressings contaminated by those feet, for if so the wound would not heal nearly so well or so quickly. A like application of anti-fly advice can be made with reference to the baby's nipple and milk supply, and a few well chosen words about the nastiness of flies will many times suffice to cause a wholesome horror of these pests. And the suggestion that sticky fly-paper, fly traps, etc., be used, can be made right here, while the role the fly plays in the spread of typhoid is not hard to explain in a way that will demand attention.

Last fall the Kansas State Fair at Hutchinson had a Better Babies Contest and at that contest I saw something of

the workings of these events that are now becoming so popular. I know of no place where more really practical health advice can be given to more people who are in a receptive mood. These contests are remarkable educational institutions and any community that can properly conduct one will be greatly benefited. They afford a wonderful opportunity to the physicians working in connection with them to instruct mothers along public health and child welfare lines.

We might go on and illustrate repeatedly, but I think you all get the point I am trying to make, and illustrations in your own practice of where advice in such instances as I have just detailed could have been given will come to mind to each of you. I have no doubt that each of you can recall instances where you have taken special pains to give such advice. Likewise there may be instances where you did not say just what really should or could have been said to warn your patrons as to this or that condition affecting their health. Can we not each and every one of us constitute himself a public health official in so far as his own patients are concerned and give just a little more thought and a little more time to telling them what to do and what not to do? I am sure much good will come from such a course if we will bear it in mind and try to carry it out in our daily work. Thus we each will be in fact a public health officer.

—R—

### **The Relation of the Various Streptococci to Rheumatism and Endocarditis.**

FRED H. MORLEY, M.D., Kansas City, Kan.

Read before Kansas Medical Society, Kansas City, Kan., May, 1915.

Except for a few reports, the most important of which was that of Poyntan and Payne, very little has been done toward finding the causes of rheumatism and allied diseases until Dr. E. C. Rosenow gave out his work. Dr. Rosenow made a great advance in the field of internal medicine when he established the relation of the various streptococci to each other, to rheumatism and kindred diseases and their



relation to the pneumococci.

Dr. Rosenow's remarkable success in isolating the organism in such high percentages of cases is due to his original method of preparing a culture media which has all gradations of oxygen tension from strict aerobic to strict anaerobic conditions. This is accomplished by using solid media, generally ascites dextrose agar. This is made by adding 10 per cent sterile ascites fluid to 1 per cent dextrose agar. This is heated at 60° centigrade for one-half hour to drive off all the oxygen. The tube is then cooled to about 42° centigrade and then inoculated. This is thoroughly mixed and allowed to harden, thus the top, which has free access to the air, is aerobic and the bottom anaerobic with all varying oxygen tensions between the two.

Another of the causes for Dr. Rosenow's uniform success in making blood cultures in malignant endocarditis is that he hemolyzes from one to two ounces of blood and gets all the bacteria contained therein into one test tube made as described above, which at some place has an area of the proper oxygen tension for the growth of this particular organism. The reason of so many failures of others to isolate these organisms is that aerobic media is used.

Even at the time when I was in medical college there was thought to be but one variety of streptococci. Now there are several varieties described. There is no distinct line between them as one can be easily changed into another variety. While some of these varieties show a variation in growth and shape, others look and act the same in test tubes, they have affinities for different structures of the body. By affinity of a bacteria I mean the power to attack certain organs in the body. These affinities can be varied by culturing or animal passage. For example, in a series of animal passages for two or three animals the streptococcus may effect only the heart valves, later in the series it involves the joints, valves and pericardium, and later, malignant endocarditis. Then it may acquire the power or affinity to attack the muscle and later is able to produce gastric

ulcer. Toward the end of the series it assumes the properties of the hemolytic form or streptococcus mucosus.

When a certain strain of streptococci is isolated from the human body, it will always show the same affinities in animals for two or three passages as it did in the human. It loses this affinity after a few animal passages.

These changes in affinities may take place in the patient's throat. It is very common to see a patient with a severe prostrating tonsillitis from which he recovers. Two or three months later he is discovered with a heart murmur. The hemolytic streptococci which were able to produce severe tonsillitis at first have lost their power to produce prostrating symptoms, but have acquired the power to enter the body and attack the heart valves. Or the streptococcus might have acquired the affinity to produce rheumatism or malignant endocarditis.

The different varieties are as follows:

The hemolytic streptococcus grows on practically all culture media. On blood agar it produces a small colony with a very large zone of hemolysis. It grows in chains of cocci. Its toxins are so virulent that it produces death before it has time to produce such lesions as the Streptococcus Viridans. This is the type found in severe cases of tonsillitis, blood poisoning and puerperal sepsis.

The streptococcus mucosus grows in chains of single cocci. It produces a very watery colony on blood agar with practically no hemolysis. Its toxins are the most virulent of any streptococci. This organism is isolated from cases of pneumonia which die of acute toxemia the first or second day of the disease.

The Streptococcus Viridans grows very easily on dextrose agar and produces in dextrose bouillon long chains of diplococci of the dumbbell shape. On blood agar the colonies are green with a very small zone of hemolysis. It has the power to adhere to surfaces and grow in clumps. This gives it the power to produce endocarditis. It loses this power on repeated culture. In

the human it causes endocarditis with large vegetations and little or no joint enlargement. It is nearly always fatal. This bacteria causes endocarditis by emboli lodging in the heart valve. The petechia, enlarged spleen and continuous temperature, are caused by breaking off of small pieces of vegetations on the heart valves. In animals it causes endocarditis with large vegetations and death, but no joint involvement. It produces death from mechanical effects and not by toxemia, as is the case with the first two forms described.

The streptococcus rheumaticus can be grown from the joint fluid or blood in acute cases, and from muscles and glands in the chronic cases. It grows in pairs or in very short chains. It never produces green on blood agar and only a small zone of hemolysis. In the human it causes rheumatic fever, simple endocarditis and chronic rheumatism. These two forms, the acute and chronic forms, are sometimes given as two distinct varieties. This variety leaves the heart valve predisposed to an attack of the Streptococcus Viridans. It produces simple arthritis and simple pericarditis and in the chronic form it produces myositis. This injected into animals produces simple endocarditis (small vegetations), simple arthritis and pericarditis.

The strain causing arthritis deformans is best described by giving a case history. The trouble began two years ago in both knees and in the ham string muscles. The shoulders and hips would ache at times. The knees are enlarged and feel hot. The muscles at the back of each leg are still sore. The tonsils are enlarged. Patient has fever at times. White blood cells are 10,200. Cultures made from the blood and joints were negative. Cultures made from the femoral gland and a piece of muscle show a peculiar streptococcus which grows as a streptococcus in bouillon and something like a staphylococcus on solid media. When injected into animals it causes myositis and arthritis.

I will give two cases of malignant endocarditis. D. F. G. Age 21. Native of U.

S. Single. Cook. Entered St. Margaret's Hospital February 19, 1914, complaining of a cold, shortness of breath and pain in the region of the heart. Family history is negative.

Past illnesses: Tonsillitis at eight years. The tonsils were clipped off at that time. He was well from that time until three years ago, when he had pneumonia. His chest had to be aspirated twice during his illness. He was in bed one month. Then he was up for two weeks, after which he had to go to bed again because of weakness and shortness of breath. The day after going to bed he had a chill followed by fever and sweating. From that time on for a year and a half he was up and down. During this time he averaged one chill a week. He lost a great deal of weight. During all this time he was unable to go up five steps without stopping twice to get his breath. The family doctor said the chills were due to malaria. Quinine had no effect on the chills.

For about one and a half years he was well and did heavy manual work. Ten days ago he had a hard chill. He had not felt well for two or three days before this. Two days later he noticed that he had fever and was sweating. He gradually became worse. He had some pain around his heart. His feet had never been swollen.

Physical Examination: Fairly well nourished. His face is flushed. Respirations are labored and the rate is slightly increased. Patient looks acutely ill. The tonsils are moderately enlarged. There is a marked capillary pulse and the vessels of the neck pulsate markedly. The heart is great enlarged with the apex beat diffuse and heaving. There is a double murmur all over the heart area. The pulse is a distinct Corrigan pulse. The systolic pressure is 155 and the diastolic is so low that it could not be made out. The fingers, when held in the hand, seem to pulsate. The liver is enlarged and tender. The spleen is distinctly palpable. No petechia could be found.

Patient ran an intermittant fever at times as high as 102. He had a chill every



two or three days. He gradually became worse and died ten days after his entrance to the hospital. Five blood cultures were made. All negative.

Autopsy: The lungs were congested and edematous. There was some fluid in each pleura. The heart was greatly enlarged, especially the left ventricle. The wall was about three-fourths of an inch thick. The mitral valve was thickened. On the auricular surface were several very small hemorrhagic infarcts. Where the leaflets touched were several red masses firmly attached to the valve leaflets. Cultures were made from these in blood agar. The aortic valves were thickened and showed the same hemorrhagic area and the same vegetations. The liver was of the typical nutmeg type. The spleen was large and soft and showed several hemorrhagic areas. Cultures made from the mitral and aortic valves showed a pure culture of streptococcus viridans. Sections of the valve showed an old inflammatory process with an acute one imposed upon it.

One of the interesting things about this case is the tonsillitis at eight years. This was probably caused by the hemolytic streptococcus. These lodged there dormant from the acute attack and gradually lost their virulence or toxicity and acquired the power to attack the heart valves without producing acute tonsillitis. This occurred some time after his tonsillitis and left his heart valve crippled and in such a condition that they fell the prey of the streptococcus viridans after his attack of pneumonia. There is a possibility that this attack may have been due to the pneumococcus, but most likely it was only the beginning of his malignant endocarditis. Another interesting thing is that the patient survived an attack of malignant endocarditis, so termed, for one and a half years, and then was able to do manual work for one and a half years.

Another interesting case of malignant endocarditis is that of a baby ten months old. This case occurred on Dr. McGonigle's service at St. Anthony's Home. The

baby was extremely well nourished and had been well except for an attack of epidemic furunculosis at three months. The present trouble started with tender left breast, tenderness over the joints, high temperature and a rapid pulse. The knee and wrist joints were swollen and red. X ray plates showed no bony changes, but there was great thickening of the soft parts. Patient ran a continuous temperature. Patient died in the fourth week of illness. The heart showed small dew-drop vegetations on the auricular surface of the mitral valves. Cultures made from these showed streptococcus viridans. This condition is extremely rare at this age.

The next is a case of acute rheumatic fever. The patient had pain, swelling and redness of several joints; later he developed endocarditis and pericarditis. A blood culture shows a streptococcus, which, when injected into a rabbit, caused joint lesions, endocarditis and pericarditis. His tonsils were removed and a vaccine made. This did not help much. In a thorough examination an infected ingrowing toe nail was found. This showed a pure culture of streptococcus which produced exact lesions, as above described. This was treated with the result that the patient recovered from all his symptoms with exception of a permanent valvular lesion. This case shows the importance of finding the focus of entrance.

The next is a case of chronic rheumatism. Mrs. O. Age 42. Married. Has no children. Family history is negative. The patient has never had sore throat. Past history is negative except for several attacks of rheumatism involving first one joint and then another. She has been gradually losing weight.

The present trouble began one and a half years ago. At first she noticed swelling of both hands, later she had pain in her hands. She said that it then seemed to go all over her. Her muscles have been sore at times and she has tired very easily. Now all the joints of the hands and wrists are enlarged and tender. All movements are limited and painful. There is some



atrophy of the muscles, especially the muscles of the hands. The elbows are tender. The epitrochlear glands are enlarged and easily felt. The movements of both shoulders are painful. The jaw cannot be opened very far and causes considerable pain. The gums show evidence of a mild pyorrhea. The tonsils are slightly enlarged. The heart is negative. The joints of the feet are tender and enlarged. There is no trouble in the knees. The urine showed a trace of albumen and a few casts. A pure culture of streptococcus was isolated from her teeth and the same streptococcus with the hemolytic variety from her tonsils. At this time she refused to have her tonsils removed. No vaccine would be made and patient left the hospital. During the next six months she had three attacks of uremia, which assumed the melancholic type. About six months later her tonsils were removed. She developed uremia and died the next day.

Eight other cases I will report as a whole, as they are very similar. All were cases of chronic rheumatism of from one to eight years standing. All showed glands near the tonsils enlarged. All cases were almost incapacitated for doing any work. The tonsils of all cases were somewhat enlarged. They were removed and vaccine made in each case of a streptococcus. All cases improved with the exception of one who improved wonderfully while in the hospital, but on returning home gradually became worse owing to the bad environment. She came to the hospital on a cot, and on leaving was able to walk four blocks to the car line. She had been nearly bed-fast for eight years, and was a marked case of neurasthenia. After the first injection of vaccine she had an attack of erysipelas. I think that this occurred in the negative phase, following the vaccine. Marked improvement followed this attack.

Conclusions: That there are several varieties of streptococci which can be changed from one to another and reverse and even into the pneumococci.

That at a given stage each variety of streptococci can produce certain symptoms

and will produce the same symptoms in animals. This is spoken of as affinity for certain organs.

That practically all forms of arthritis are infective, and that the seat of entrance is nearly always in the tonsils, nasal cavity, or teeth.

That in a few cases the seat of entrance may be elsewhere, as in the case of rheumatism described.

That the foci of infection must be removed before any results can be expected from the vaccines.

————— R —————

### **Broncho-Pneumonia—Its Common Complications.**

T. C. KIMBLE, M.D., Miltonvale.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

In presenting this paper to the Medical Society, it is not my desire to present to you an exhaustive study of the disease, for you may get that from any textbook, but to give a sufficient outline of the most salient points in order that I may present to you some of the results I have attained in my care of the disease and its more common complications. I use the term "common complications," not because I find them so mentioned in the books and medical magazines, but because they have been the most usual with which I have had to deal in my own practice and as consultant. I shall attempt to give you, then, the results of my own personal observation, illustrated by a few of the fifty-eight case records as compiled in the past two years.

We shall define catarrhal pneumonia briefly as an intense catarrhal inflammation of the small bronchial vessels, producing a disturbance of nutrition. The most constant change in the parenchyma of the lung is simple atelectasis, which shows itself first at the posterior border of both lower lobes, i. e., an inflammatory disturbance of nutrition, beginning in the collapsed portions of the lungs.

This is usually a disease of early childhood, rarely found in a child over six years of age unless the child be a sufferer of

marasmus, hereditary lues or tuberculosis, or having recently had whooping cough.

One of the most constant pathological conditions arising in this type of pneumonia, is the plugging of the bronchiole with bits of mucus, thus causing the atelectasis. Because of the weakened condition of the child, this mucus plug is not dislodged. The ensuing turgescence of the bronchial vessels reaching into the capillary confirms the diagnosis, catarrhal pneumonia, pathologically. It is in these mucus plugs and the turgescient vessels immediately surrounding them that you will find most abundantly the organism causing the particular case of catarrhal pneumonia with which you are dealing. The hepatization sometimes found in the early stage is due, not only to the exudation into the alveoli, but in a greater degree to the production of large amounts of mucus by the bacteria themselves.

In the cases that I have recorded, thirty-one have resulted from influenza, nine from whooping cough, five from measles, three from tuberculosis, and ten from various causes, some of which seem to be a primary infection.

The essential lesions are the atelectatic areas; inflammation of bronchioles and of the adjacent alveoli; rapid casting off of epithelial cells; outpouring of mucus and an increased cellular desquamation which fills up tubes and air passages, thus forming centers of consolidation. This may take place in one or both lungs or may continue till it becomes lobular.

Broncho-pneumonia being generally a secondary disease, is to be recognized by some increase in fever and pulse rate and especially a difficulty in breathing. The respiration being more labored than panting and the "expiratory grunt" is especially prominent with the dyspnoea following the atelectasis. At this time you will frequently notice a loose, leaky skin showing the extreme prostration. This symptom is of ill omen. The physical signs of broncho-pneumonia are distinctive to that one who has a proper conception of the multiplicity of clinical forms or varieties of

this disease and knows what to expect in his physical examination. Too many clinicians wait for marked consolidation or other prominent symptoms before making a diagnosis, and either jeopardize the lives of their little patients unnecessarily or leave them to die undiagnosed and untreated. One must be prepared for rapid changes in physical signs as well as for change of the location of these signs in broncho-pneumonia, for kaleidoscopic changes are certainly characteristic of this disease. I have found some of the most prominent signs at the onset to be the rapid, labored breathing with a play of the *alæ nasæ*, rhonchal and tactile fremitus, particularly marked during crying. Tympany is an earlier sign than impaired resonance—weak breathing rather than bronchial breathing. The high pitched sibilant rale is almost pathognomonic.

#### COMPLICATIONS.

*Meningitis.*—One of the most serious complications as well as the most frequent with which I have had to deal is the infection of the meninges of the brain and cord, with the resultant paralysis and coma. The advent of this complication will probably be sudden. You will usually find the chart continuing as on former days except for little flurries in the temperature, sudden remissions and hyperæmia, which, unless you have a faithful and observant nurse on your case, will frequently go by unnoticed. If you do not foresee and forestall this condition by proper care and medicinal protection, you will suddenly learn that your patient has no fever at all but cold extremities and a skin leaking, followed by coma or convulsions of the clonic type. In the event of convulsions late in broncho-pneumonia, I have learned it means either meningeal or gastro-intestinal complications. In the event of the cerebral meningitis, one or two convulsions are quickly followed by coma, slowed respiration, and irregular heart action. The occiput will be hot, the neck rigid with tender points along the cervical spine. Percussion over occiput will cause blinking of the eyelids, fre-



quently dilatations and contractions of the pupils without reference to light, muscular twitching in associated areas, and if the percussion be not light, tonic muscle spasm. Skin temperature from 96 degrees to 97 degrees F. The mouth temperature at early stage may show subnormal, but will usually mount to 104 degrees or 105 degrees, and in one case I saw a temperature of 110 degrees with recovery. For the first twenty-four hours nothing other than this may show itself, and if the disease be arrested at this point, I believe the outcome will usually be an uneventful recovery. If progressive I have found a paralysis and later muscular atrophy. In one case it was only by the use of artificial respiration and amyl nitrite that life was maintained.

It is here that the skill of the attending physician and nurse are taxed to the uttermost, for the conditions must be met symptomatically as they arise. Here again you get your kaleidoscopic changes, and no set line of treatment can be outlined and maintained with even mediocre success. Lay the little head on the ice bag (and keep ice in the bag, for you will be surprised how quickly it will melt), sinapism to the nape of the neck, respiratory and cardiac stimulants; and here I believe that sparteine sulf. and brucine will give the most general beneficial results—even lumbar puncture is necessitated at times, as in three instances that I will give later. But as I hinted before, in the treatment of meningeal complications of broncho-pneumonia, don't be bound down by any hard-and-fast line of treatment, for if your success is even mediocre you will find use for drugs and treatments not generally found in the armamentarium of the general practitioner. Hydrotherapy, osteopathy, mechanico and electro therapeutics have a place here.

Case 1. R. C. Male child. Five years old. Family history negative. Seen first December 25, 1913. Temperature 102. Respiration 34. Pulse 120. Pneumonic area in left lung. Lower left lung full of high sibilant rales. Diagnosis, catarrhal pneumonia. The usual course till the sev-

enth day, when the temperature suddenly dropped to 97, pulse 160, respiration 20, respiration labored and irregular. Coma, tender spots along spine, and convulsive tendency from slight percussion on cord and base of skull. Respiration becoming more slow with intermissions, pulse rapid and weak. Could not get radial pulse. Amyl nitrate by inhalation and ice bag to neck and brain. Artificial respiration and amyl nitrite necessary for twelve hours when he began slowly to recover and continued to improve till close of eighth day, when we removed the ice cap and got a relapse. Artificial respiration and amyl nitrite inhalations used again for six hours, when he began again to improve. Recovery from this point on was uneventful except for paralysis of left leg, followed by muscular atrophy, which gradually became normal at end of six months. The medical treatment in this case was sparteine sulph. gr.  $\frac{1}{4}$ , every four hours, hexamethylamine gr. j every four hours and sodium citrate gr. v every six hours. Electricity and massage were applied to the affected muscles twice daily.

Case 2 and 3. Ages three and five years, respectively. Seen on the seventh day of the disease in consultation. Diagnosis of broncho-pneumonia—lower lobes of both lungs dull and scattered tympanitic areas. Sibilant and mucous rales in both lungs at bases and throughout middle lobes. Mucous rales over bronchi. Temperature 100 degrees F., pulse 140, respiration 60. Both children were unconscious. Heads drawn back in slight opisthotonos positions. Occiput and neck very hot. Pupils irregularly dilated and responding to percussion on spine more than to light. Diagnosis of meningeal complications was made and spinal puncture was made and about an ounce of turbid spinal fluid withdrawn. This relieved the opisthotonos almost immediately, but in the female the temperature and pulse began to rise almost at once, and in an hour the temperature was 106 degrees F. and the pulse 160. Microscopic examination of the spinal fluid showed the influenza bacilli, staphylococci and pneumo-



cocci. Ordered the ice bag to nape of neck and occiput, Sparteine sulphate gr. 1-10 hypodermatically; and as soon as patients could swallow gave formin gr. ij, and sodium citrate gr. v every six hours. In these cases we had no relapse, no appreciable paralysis nor muscular atrophy.

Case 4. Male child, age 18 months. Seen in consultation on the tenth day of disease. Attending physician gave, and history sheet showed, a typical case of broncho-pneumonia following influenza. His temperature was 107 degrees F. and pulse too weak and rapid to count and respiration rapid and very labored with the expiratory grunt particularly well marked. The babe went into convulsions almost immediately, which lasted for four minutes. After convulsions the temperature dropped to 99 F., pulse and respirations slow and irregular. Child lay in a coma and after a few minutes the respirations ceased altogether. Artificial respirations, amyl nitrite by inhalation, ice-bag to spine and back of head and a hypo of sparteine sulphate gr. 1/16 was given and after a half hour the respiratory functions were resumed and the pulse became evident at wrist. Light percussion over occiput caused a slight resuming of the convulsions with head drawn back and to one side and the breathing again irregular and of the Cheyne-Stokes variety. As the abdomen was unusually distended and tympanitic used the turpentine emulsion injection which caused the expulsion of much flatus and a large mass of mucous stool. This relieved the tympany somewhat. Practically the same treatment was ordered as in the other cases, except I added brucine 1/64 with the spartein every six hours. There were six series of convulsions in the next seventy-two hours, but not as heavy as those first seen indicating the gastro-intestinal complications. On the evening of the fourth day spinal puncture was done, a couple of ounces of a turbid spinal fluid was withdrawn which relieved the tension and muscular rigidity. The microscopic analysis of this fluid showed bacilli of tuberculosis and influenza, and the pneumococci

and the streptococci. On the fourteenth day of the disease we got a slight paralysis of the forearm and leg on the left side which today remains quite apparent though slightly improved.

The other complication to which I wish to especially call your attention is that of tuberculosis. We are finding more and more cases of tuberculosis every year in Kansas, and it is the duty of every practicing physician to be ever on his guard for this disease and not allow the prejudice of his friends and clients to bluff him from his diagnosis. We can make a *definite* diagnosis now and should do everything in our power to eliminate this disease from the state.

Case 10. L. D. Previous history.—Mother died of tuberculosis when patient was a babe. Father healthy and one sister apparently healthy. Patient male, aged seven years. Was called to see him on January 5, 1914. Found him suffering with broncho-pneumonia complicated with whooping cough. Consolidated areas throughout the lower lobe of the left lung. The apex of the right lung also the middle lobe tympanitic and receiving no air. Sputum showed numerous fields of tubercle bacilli and pneumococci. On the fourth day I found the meningeal complications present and upon spinal puncture withdrew some two ounces of a spinal fluid which gave us numerous fields of tubercle bacilli, pneumococci, bacilli of pertussis. This relieved the spinal symptoms and on the fifth day of the disease the child developed a purulent endocarditis and died that night.

I had no nurse on this case, and so can give but little of a definite nature, and mention it only to show the numerous complications with which we are liable to meet in our treatment of broncho-pneumonia.

Case 11. Male child, 7 weeks old. Family history negative, also previous history. Child was taken with broncho-pneumonia February 13, 1914. The whole of the right lower lobe was affected with the pneumonic areas, and after the usual run of seven days case was discharged and left with the

nurse. Was called back the 28th and found the same babe with a harsh, almost croupy cough. Temperature 103 degrees F., pulse 144, respiration 40. Upon examination found both lungs filled with the moist rales and over areas in the lower lobes the characteristic sibilant rales. Tympanitic areas over the left lung more pronounced. The apex of the left lung was consolidated and no air current could be detected. Gave my usual treatment of spartheine sulphate, brucine, sodium citrate and improved kaolin plaster and the ice-bag to occiput. Also alcohol baths. On the fourth day of the relapse the patient developed a fine rash somewhat scarletinaform in character. The skin became leaky and the temperature kept coming up each evening to 103 and of mornings being from 99 to 100. The gradual weakening and loss of vitality kept up for fourteen days more and then an acute nephritis developed and the little fellow died that night. The post-mortem showed a general miliary tuberculosis accompanying the broncho-pneumonia.

Realizing that so small a series of cases does not establish many facts, I do not feel that the conclusions that I may draw will do little but cause some of you to look a little more carefully at your cases of grippe, measles, whooping cough and so-called "bad colds" and possibly to be a little more successful in your treatment.

There are two things that I want you to especially notice and try out and see if you get the favorable results with them that I have, and that is the use of the sodium citrate as means of preventing, or at least retarding the coagulation of the blood and thus preventing so much hepatisation in your pneumonias. I fully realize that this is a use not spoken of in our materia medica and books on therapeutics, but one which we came across some years ago when making some studies on the blood stream and its coagulation in vitro in the laboratories. Also the "*Improved Kaolina Kataplasma*" according to the formula given above. I had completely abandoned the use of this emplastrum when I tried out

this combination, and have found that in most of my pneumonias and bronchial troubles I scarcely ever give a dose of cough syrups of any type. Surely any medication that will render the use of the modern cough syrups unnecessary has a place in the practice of every physician. Another thing that I want to call your attention to is the use of spartheine sulph. instead of strychnine. I believe that it is more reliable and a better drug to use than the strychnine in the pneumonias.

I believe that my results will warrant investigation and a tryout by others, for out of fifty-eight cases in which I saw the case at the onset I got complications in but four. In some eighty cases of pneumonias of both types, bronchial and lobar, my deaths have but numbered five. Four of these were cases in which the attending physician had given the old line treatment and had given up the case to die before I saw it.

Taking the cases as a whole then, I can give the following summary: Number cases in this series fifty-eight. Mortality .8 per cent. Complications in 8 per cent. Meningeal complications 20 per cent. Gastro-enteritis 60 per cent. Tuberculosis in 5 per cent of the complicated cases. Tonsillitis 5 per cent. General glandular infections in 5 per cent. The remaining number of complicated cases were scattered among the more trivial conditions.

In closing I wish to call your attention to the spinal puncture as a method of treatment in the meningeal complications as well as means of diagnosis.

—R—

### Some Interesting Cases of Protein Sensitization.

DR. J. G. MISSILDINE, Parsons, Kan.

Read before the Kansas Medical Society, Kansas City, Kan., May, 1915.

Much is being said about the mechanism of anaphylaxis; it has been shown that the cause is the absorption of parenteral protein by an individual who has been previously sensitized to it.

There is a similarity in the symptoms excited by the different proteins; which in



general, are asthma, frequently urgent enough to lead to distressing dyspnoea, albuminurea, nausea, lacrymation, urticaria, erythema, odema of the mucous membranes, rapid vaso-dilatation and its accompanying rapidity of the heart. In extreme cases prostration and death may result.

Many striking examples of the phenomena are seen, among which are the numerous cases of hay fever due to the absorption of the protein from pollen. The crisis of pneumonia is undoubtedly the reaction resulting from the absorption of certain products of bacteriolysis. Certain individuals show a marked hypersensitivity to egg albumen, others to the epithelial debris from horses, shell fish, and less frequently beef, fish and certain vegetables among which are buckwheat and oats.

Talbot reported twelve cases of egg hypersensitiveness seen in the Children's Hospital in Boston over a period of two years. He points out the fact that undigested protein is much more apt to reach the circulation of children than of adults whose digestion is more completely carried out.

I have recently met with a case of this kind, which I will now report.

B. A. Male, age 27, occupation, bank clerk; presented himself for treatment because of inability to eat anything containing egg. Family history: Negative to anaphylactic reactions. Past history: Has had mumps, chickenpox, measles and tonsillitis; recovery uneventful from each. His mother discovered during his infancy that the smallest amount of egg caused nausea, vomiting, violent urticaria, swelling of the mucous membranes, and difficult breathing which lasted several hours, leaving the patient considerably prostrated for two or three days. His inability to eat egg continued, as was frequently brought out by accidentally taking something containing egg, as would occasionally happen when eating away from home.

A one to ten thousands solution of egg white was prepared, a drop of which

was instilled into the conjunctival sac. Lacrymation, redness and itching of the eye immediately followed and in a few moments he complained of itching in the throat, which was, no doubt, due to a minute quantity of the egg solution being washed through the nasal duct into the throat.

#### TREATMENT.

He was given one-tenth of one c.c. of a one to ten thousand solution of egg white in normal salt solution subcutaneously. A slight reaction immediately followed, which consisted of his usual symptoms though less marked.

Subsequent doses were given at two or three day intervals, using double the quantity each time. A slight reaction followed each dose until the dilution reached one to one hundred, after which no reactions occurred. He was then given tablet triturates of dried egg and sugar in doses of one m.g. each three times a day; this was increased one tablet each day, until ten tablets were being given three times each day. Tablets of one c.g. were then given. No reaction followed the use of the tablets. The patient assures me that he is now able to eat egg in any quantity. Several months have passed since the treatment was discontinued.

I have met with three cases of hypersensitiveness to horses, two of which I have treated and reported in the New York Medical Journal of October 24, 1914. The symptoms presented were rhinitis, conjunctivitis, lacrymation, and typical asthmatic attacks.

The diagnosis may be easily confirmed in the office by a very simple method. A one to ten dilution of horse serum in normal salt solution is freshly prepared, and one or two drops are instilled into the eye. Within a short time the ocular and palpebral conjunctiva becomes injected, the patient complains of itching and the identical sensations experienced after having ridden behind a horse. Very slight reactions were present in dilutions up to one to 700.

Horse serum dilutions in normal salt



solution, one to ten, applied to an abrasion of the skin of the arm, yielded an area slightly edematous directly over the abraded surface and an erythematous area surrounding it for a distance of about three c.m. There is itching about the site, most marked the following morning and gradually decreasing, the reaction being absent after the third day. Normal salt solution over a like abraded surface is used for the control.

Another method, which I cannot commend, is that of spraying a small amount of the diluted serum upon the Schneiderian membrane. The patient on whom I used this method was immediately seized with a paroxysm of violent sneezing, which lasted for ten minutes and was followed with a typical asthmatic attack.

I have succeeded in producing immunity in the two cases treated by decimal dilution, given hypodermically at first, and intravenously after the dose became too bulky to put under the skin.

Both cases presented the typical symptoms after being near horses, viz., conjunctivitis, rhinitis, and sometimes slight and sometimes urgent asthmatic attacks, according to the period of exposure, weather conditions, etc. Dry weather seems to add to the severity, probably because the secretions from the horse's skin were free to be blown through the air.

#### TREATMENT.

The treatment used in each case was as follows: One-tenth of a c.c. of a one to 1,000 solution of normal horse serum in saline solution, was given hypodermically. No reaction followed in either case. In three days two-tenths c.c. was given, with a very slight reaction in one of the cases. Five-tenths of one c.c. caused a slight amount of erythema about the site of injection and mild nasal and eye symptoms. The subsequent doses were given at four day intervals. One c.c. caused very slight symptoms.

A dilution of one to 100 was next used as before, with slight variations. The reactions were trivial. The next of the series (one to ten) was then used with very lit-

tle reaction, a small red area about the needle hole, which itched for a day or two, and sometimes mild nasal and eye symptoms. Undiluted serum was finally given in doses of one-tenth c.c., five-tenths c.c., one c.c., and two c.c., ending the treatment with five c.c. given in one of the veins of the forearm. Absolutely no reaction could be made out after the final dose.

Two months have passed since the last patient was treated, and she assures me that she has not experienced a single symptom, and that she has taken frequent drives with a horse to convince herself that the trouble would not recur.

If further work along this line proves as successful as this apparently has, I have no doubt that it will have a practical application in those cases where there is an abnormal intolerance for the immune serum taken from the horse, and at the same time be of value in freeing patients from the troublesome attacks from which they suffer after being near horses.

—————R—————

#### The Practical Control of Contagious Disease.

HAROLD B. WOOD, M.D., DR. P.H., Topeka, Kan.

The elimination of disease is the millenic goal of the health officer.

The diseases which are of chief concern are the contagious diseases of childhood, the diseases of middle life which result from defective living and working conditions, and the factors of later life which bring degenerative diseases prematurely or hasten death before a purely natural termination. A death from senility or from one of the degenerations operating at senile age, which has not been hastened by improper modes of living or medical shortcomings, may be termed a natural death. Any death occurring before this time very appropriately may be regarded as premature and at least remotely preventable.

Almost any death occurring in middle life may be classed as due to some defective living or working condition. We may not

be able for many years to determine wherein every defect exists or how to prevent or overcome them. But the defects are there, although, perhaps, they may not be remedied for centuries. The defects which cause tuberculosis and typhoid are apparent, as are the causes of deaths from violence. Cancer is due to a defect of which the location, cause and remedy are unknown. The defects which cause or permit diseases like smallpox are social, and the negligence which permits the transference of contagious diseases is rapidly eliminated in the advance of knowledge of these diseases and the more modern methods of their control.

The system of control of contagious disease which may be adopted and enforced is dependent upon local factors. These factors are chiefly rooted in the willingness of a community to have its public health improved. The greater expenditures a community will make, the more healthy it will become. As with every commercial or social endeavor, progress and advance are very largely indicated and controlled by the budget. A cheap health officer means a low valued health. It, therefore, becomes necessary for any health officer to give to his community the maximum results commensurate with the financial backing. Human endeavor has limitations, and where a health office is permitted to expand it develops in activity, to the great advantage of the whole community. When funds are not provided sufficient for a local health office to consider such needed activities as improving the milk supply, instituting school inspection, laboring to reduce infant mortality and carrying on general education in health through all the various possible phases, the energetic health officer should devote his time primarily to the control of the communicable diseases.

The control he can expect is largely dependent upon the size of the community he serves, the accessibility of the schools and of the reported cases of disease, and the allotted time at his command. Every case reported demands and needs a visit. The health officer should visit each case at the

beginning of illness, and, if possible, at a later time to terminate quarantine. The public has a right to know where cases of certain infectious diseases exist, as a means of knowing how to avoid them. Therefore every house of scarlet fever, measles, diphtheria, mumps, German measles, chickenpox, smallpox and whooping cough should be placarded by the health officer.

The health officer visits these households to take steps immediately to prevent the disease spreading into other homes or communities. He does not call with the intention of giving advice about medical treatment, and refuses to answer questions reflecting upon the attending physician or any other doctor. He is neutral. His duty is to get the ordinary statistical data about the patient, as required by law, and to get such other information as will assist him in limiting the infection to the one individual or the one family.

Immediately after learning of the location of a case of contagious disease, the health officer should himself visit the home of the patient for the purpose of locating any other cases of the disease. When a case of contagious disease is seen by the physicians of the class who report, there is little danger of the infection spreading further from this individual, as the physician has already given instructions which lead to satisfactory isolation of the patient. But the health officer should visit the family in his search for missed cases, for the origin of the infection and for the location of susceptible children who had already been exposed to this patient before the doctor was called or diagnosed the disease. A health officer who neglects to search for these other cases fails to do his duty.

If the health officer simply sends a lay employee around to placard the reported houses and does not visit them himself for epidemiological purposes, he cannot expect to reap the greatest success in decreasing disease. If the officials who provide the finances for public health work do not sufficiently meet their obligations to make it possible for the health officer to track up



the sources of disease and to control the active disseminators of infection, these officials are not sufficiently appreciating their public duty nor giving their constituents their due.

In the control of the contagious diseases, the health officer calls at the house and records the ordinary statistical data of the name, address, sex, age, color and station of the patient and the name of the disease. It is advisable for him to get also the name of the school attended and class for the purpose of notifying the school principal. The school teacher then has an opportunity of knowing what to expect to happen in the class. The notification card sent to the teacher should state whether, in the opinion of the health officer, the child was infectious when last in school. Then the teacher, by asking questions in the class, is able to determine what children are probably susceptible. If the notification card is correctly marked, the teacher knows when the minimum incubation period elapses, when to expect symptoms, what symptoms to expect and in whom. Upon the first evidence of beginning disease, she excludes the pupils. Superior to this method of school control is the daily inspection by the health officer of the class of children involved.

The children who are probably susceptible to the disease and who have been closely exposed to a case of contagious disease, are located by the health officer. It is impossible for him to learn all contacts, but the majority can be located. The health officer can notify the parents what symptoms to expect and when. The schools are also notified of what children should be excluded from school. Particularly is this precaution of exclusion extended to the susceptible contacts who are the members of the same family with the patient. This exclusion applies to susceptible children exposed to cases of measles, mumps, chickenpox and whooping cough. Children exposed to diphtheria or scarlet fever are excluded immediately from school. If they change their domicile, it probably may be safe for them to return to school one week

later, provided after a diphtheria exposure a negative nose and throat culture is obtained.

As health officer of Topeka, I adopted as a practical and working basis the following length of time for exclusion from school of the susceptible children exposed to the infections:

Chickenpox—after 10 days, exclude 7 days.

German measles—after 7 days, exclude 5 days.

Measles—after 7 days, exclude 10 days.

Mumps—after 10 days, exclude 10 days.

Whooping cough—after 7 days, exclude 14 days.

These times of exposure apply when the health officer, or his medical assistant, actually inspect the patient in order to confirm the diagnosis of the physician. If the day of exposure is definitely known it seems an injustice to exclude a child from school until the average minimum incubation period has nearly passed. Where the day of exposure is indefinite, the earliest probable date is selected. If the excluded child begins to develop symptoms of infection during the period of exclusion, the case becomes one of disease and is further excluded and isolated as a case. These time periods are subject to later changes as investigation indicates the necessity or practicability.

The time of quarantine or isolation of a case of communicable disease has not been definitely fixed, but, with some diseases, will later be altered as we learn more about the method of transmission and about the infectivity of the diseases. The quarantine time also depends largely upon whether the health officer has the opportunity to reinspect the cases to terminate quarantine. Where he can revisit the cases the quarantine will, of course, be much shorter. At Topeka, during a short period, reinspection has been made and resulted in releasing chickenpox cases on an average of 11.7 days, diphtheria in 13 days, measles 11.4 days and smallpox in 10.4 days.

In sixteen cases of measles the time between the first appearance of the rash to



the release of the patient averaged 12.7 days; with seventeen cases of chickenpox this period averaged 12.4 days. The extremes in these diseases were nine and twenty-one days of isolation with measles and eight and sixteen days with chickenpox. With the system then in vogue, I do not believe these quarantines were too brief for a city as small as Topeka.

The few cases of mild smallpox under quarantine were released after an average of 10.2 days. The chickenpox and smallpox cases were released as soon as every crust had disappeared. The mumps isolation period was provisionally adopted to terminate one week after the disappearance of the swelling and tenderness. The regulations of the Kansas State Board of Health now require scarlet fever cases to be quarantined a minimum of twenty-eight days. Measles cases have been released after the disappearance of the cough and all signs and symptoms referable to the head. Where the health officer is unable to inspect cases reported as German measles, it is safer to require isolation for the same time as with measles, a minimum of fourteen days or preferably for sixteen days, as is required in Pennsylvania.

The advantages of all cities and communities adopting the cultural method of releasing diphtheria quarantine is clearly shown by the results obtained in Topeka. Of the sixty-one patients cultured after recovery from all subjective symptoms, fourteen gave positive cultures, showing that twenty-three per cent of these persons would have become active disseminators of the disease if they had not been culturally discovered and controlled. Of the one hundred and fifty-three other persons living in the same households with the quarantined diphtheria cases, fifteen or 9.8 per cent gave positive cultures at the time the quarantine would have been raised under the old system of release. Some of these, if released, would undoubtedly have become active but innocent diphtheria carriers, and would have maintained the high morbidity rate of the days which have passed.

### Address

A. HAGGART, M.D., Ottawa, Kan., Retiring President Franklin County Medical

Mr. Toastmaster, Ladies and Gentlemen, Fellow Members of the Franklin County Medical Society:—As we are gathered here tonight around this splendid banquet table, it affords me great pleasure to look into the many new faces who have joined our ranks. As retiring president of this society I wish to extend to you a hearty welcome; we want you to feel at home, to enter into the active service of our organization and assist in building and maintaining a society second to none in the state, a society which will be a credit to the medical profession, a credit to the Kansas Medical Society and to the American Association, of which we form a component part.

We all realize that an organization to survive and gain strength must have a continuous flow of new blood, otherwise it is doomed and bound to perish, such as you and I, if our blood supply was shut off. So "all together," let's put our shoulder to the wheel and put our society in the front row. We can do it if we will. We owe it to ourselves and the community at large.

Friends and fellow members, do you realize that fourteen years ago we had no such organization as a medical society in this county, and prospects for forming one were so discouraging that many of our best members of today thought it impossible? But some one said, "Let us call the doctors together," let us meet, get acquainted, talk our troubles over and be friends. Well, we did meet, a fairly representative number, and men who before were not personally acquainted (from choice or otherwise) attended that meeting. In these early meetings we were like strangers in a strange land, these gatherings were not love feasts, I am frank to admit, but time brought about a gradual readjustment, the broader friendly spirit developed and all trivial matters were forgotten as we came into a full realization of our one big purpose, the organization of the *Franklin County Medical Society*.

As I look around this table I also notice

another group of men who are in a class by themselves, the pioneers. They are what I would call the *mud sills of this organization*, they were a part in the formation which made this society possible. They are the ones who have answered the call to duty at all times through the few years of this society's existence. Their motto has been, "Help One Another," and to these men we owe much.

Many familiar faces are absent, some are answering the call of duty, some have moved away and others have passed to the great beyond. To this last group I wish time permitted me to pay special tribute, but as I pause in reflection, and as I think of these medical brothers who have finished their life's work, who spent their life in the great cause of helping suffering humanity, I call to memory a bit of my Canadian history, the story of Wolfe, the great British general, as he glided down the St. Lawrence in the silence of the night, on the eve of that eventful battle, on the plains of Abraham, who calling his officers about him, repeated this line from Grey's elegy on a country church yard, "The paths of glory lead but to the grave."

Friends and fellow members, as we delve into the prehistoric annals of medicine and surgery and see the wonderful advances that have been made, enabling mortal man to stay the hand of death, to wrest from him his seemingly helpless victim, it is simply marvelous. This is the most inspiring story that has ever come down the tides of time, one that makes every being in whom rich pulses bound lift his eyes, draw a deep breath, and glory in the achievements of his fellow man, whose marvelous development of technical skill had its origin in Creation's early youth, in those misty pre-human days when the earth was rank and young and wild. Here the science of medicine and surgery was born and had its crude beginning.

At no time in that long period, when man was learning to stand erect and use his front legs for the purpose of grasping a weapon, was he entirely devoid of some knowledge of the treatment of wounds. It

was a part of racial inheritance and experience, shared to a greater or lesser degree by almost all animals possessing sensation.

When our great-great grandfather a thousand times removed received a mauling by a cave bear, whose carcass he attempted to appropriate for food, or from the saber-toothed tiger whose skin he proposed to transform into a nice warm coat, his hand instinctively jumped to the injury, closed the wound, and staunched the flowing blood by pressure over the parts. And by and by, after centuries of experience, certain members of the tribe, by reason of natural aptitude, became more proficient in binding up injuries and dressing raw surfaces, and with rude splints repairing fractured limbs.

And so a powerfully built creature, covered with reddish brown hair, having a forehead like a rat, and the whistling, clucking voice of a monkey, was the prototype of our clear eyed, competent physician and surgeon of today.

During the long ages that intervened while our crude ancestors were developing skill in medicine and surgery, a marvelous epic of achievement is written. Up from the sullen marshes of stifling ignorance, by the rock-ribbed road of prejudice and bigotry, along the steep precipices of denunciation and persecution, through the narrow paths of hostility and bare tolerance, out finally upon the broad plateau of recognition and loving, generous gratitude for service nobly performed, it has been a wonderful pilgrimage. All the heroism of sacrifice, of patient plodding, of untiring effort and enthusiastic zeal, has gone into this science of treating diseases and saving lives by medical and surgical means.

The rude savage, plucking out the barbed spearhead, sought healing salves and soothing lotions to soothe the cruel pain of the wound, and cooling drafts to allay fever and inflammation. In fact man has subjected to examination everything on earth and the seas below and in the skies above, as far as he could reach, for the purpose of determining whether or not they pos-



sess medicinal qualities, and, if so, what they were and how they could be utilized.

There is something new and startling in medicine and surgery every day; at one time it is a new serum, at another it is twilight sleep, at another sunrise slumber. Major operations are performed under local anesthesia, typhoid fever has been reduced greatly by anti-typhoid vaccination, cholera has been restricted to a great extent by serum, tetanus has been controlled by the early use of tetanus anti-toxin, the British surgeons are using a combined anti-gangrene and antisepsis vaccine, containing both the gas bacillus and the streptococcus; with the recent additions to our knowledge in the realms of bone grafting and transplanting many wonderful results are being obtained, even the successful transplantation of teeth and various other parts of the body have been reported very recently by American surgeons on the battlefields of the greatest war in history. There is something new every day, the Council of Pharmacy and Chemistry of the American Medical Association are accepting new preparations every week. I am also informed that there is a bacillus being cultured for the prevention of old age, but they haven't quite got it hatched out yet.

The field of medicine and surgery is changing for the better every day while much of our supposed civilization, during the past two years of the great European war, has proved itself to be nothing more than veneered barbarism.

There is a story that Napoleon, during his Egyptian campaign, visited the pest-house at Jaffa, being struck with horror at the sight of the hopeless cases of scurvy, smallpox and typhus there, suggested to the physician in charge that it would be humane to do away with the poor wretches painlessly. The physician is said to have replied with great dignity: "Sire, it is my profession to try to cure and not to kill." That doctor, in my opinion, was even a greater man than Napoleon, and such men as he have made the medical profession what it is today. Whenever the question of the deliberate destruction of the unfit or

defective arises, the words of the doctor to Napoleon comes to memory. I believe there are many persons in the world who would rather be deaf, blind or crippled idiots and feel for one short hour in spring the cool air on the throat, than not to have been born at all; and no doctor, no jury, no set of men should be allowed to make this choice for anyone.

There are many new things in medicine and surgery that I would like to mention in detail, but time will not permit. I do wish to mention one thing more, though, while I have the floor—the close relation of dentistry to the medical profession. This relation is drawing nearer every day, in fact, the two professions will become so closely interwoven that they cannot remain separate. The handwriting is on the wall, the time has come when it is an undisputed fact that the general health depends largely upon the teeth and oral cavity. Even a few years ago who would ever have thought of attributing disorders in the gastro-intestinal tract to a concealed abscess at the root of the tooth? Yet this is one of the greatest scientific discoveries of today, made possible and practical by X ray photographs of the jaw.

Almost any systemic disorder, such as stomach and intestinal trouble, anemia, diseases of the joints, heart and nerve affections and neuritis can arise from neglect of the teeth; even seizures, simulating epilepsy, have been traceable to pernicious root abscesses of the teeth, which were not revealed by local pain, did not respond to pressure, the application of heat or cold, or any of the tests that would reveal the trouble. Let us co-operate with the dentist, secure his aid in unknown cases of sepsis, ulcerative carditis, and arthritis which resist treatment.

As I have already run over my allotted time, and you have yet to hear from our worthy brother, Dr. Hetrick, and others, I just want to say this in conclusion—I wish to thank, in behalf of the society, Mr. Haggard, proprietor of the Nelson Hotel, for the generous banquet served here this evening. I also wish to thank my friends and



fellow members for the loyal support given me during my administration, and hope you will continue, as you have in the past, to put forth your best efforts to make the Franklin County Medical Society one of the strongest in the state. I thank you.

—R—

### Rupture of Lung by Bursting.

DR. HARRY W. DAVIS, Durham, Kan.

On account of the unusual physical finding, the report of this case may be of interest.

Patient, male, age 30, good health, was riding in rear seat of automobile, when in meeting a buggy drawn by one horse, the driver became confused, resulting in a collision, in which the shaft of the buggy penetrated the curtain of the car, striking the patient one inch below the right nipple.

When I saw him one hour later he was in bed, resting easy, with no cough, no hemorrhage and no expectoration. Pulse and temperature normal.

Complains of soreness under right nipple.

Inspection showed skin raised in irregular blebs from the tenth rib to root of neck, and from the parasternal line to the posterior axillary line, also quite extensive in the axillary space. Palpation gave a peculiar crepitant feel as of air or gas.

Careful search revealed no signs or symptoms of fracture, even the skin being intact and of normal appearance. Deep breathing and straining produced a balloon-like elevation of the skin below the right mammary gland.

Diagnosis: Traumatic rupture of lung and pleuræ.

A force sufficient to rupture both pleura and lung without fracturing a rib is at least unusual. The end of the shaft was too large in diameter to have gone between the ribs. The fact that the skin was not broken is accounted for by the heavy clothing worn. The lack of symptoms for the extent of the injury was uncommon.

The injury was probably produced by the fact that the patient was warned a second or two while the shaft was tearing

through the curtain, during which time he instinctively braced himself and held his breath, thereby closing the glottis with his lungs full of air, the sudden blow bursting them.

Treatment: In consultation it was decided to strap chest and await developments. The patient made an uneventful recovery.

—R—

### The American Medical Golfing Association.

In accordance with preliminary announcement made in the A.M.A. Journal previous to the last A.M.A. convention, the American Medical Golfing Association held its first tournament in San Francisco, June 21, 1915. Arrangements were then made for the organization and that is now complete with the following directors:

President, Wendell C. Phillips, New York; vice-president, James Eaves, San Francisco; secretary-treasurer, Will Walter, Chicago.

Plans are now being made for the second tournament to be held in Detroit at the forthcoming A.M.A. convention in June.

The directors have decided to list as charter members all fellows who shall have enrolled by April 1, 1916.

All fellows of the A.M.A. who play the game are eligible, and may obtain the desired information from the secretary-treasurer, Dr. Will Walter, 122 South Michigan boulevard, Chicago.

Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that this will add materially to the social interest of the A.M.A. as it has to the B. M. A. conventions.

—R—

A report of the Department of Health of New York City, on a bacteriologic study of fifty cases diagnosed as "grip," showed that the streptococcus played the leading role. It was the predominating micro-organism in twenty-six of the fifty cases. *Pneumococci* were responsible for nineteen cases, *Micrococci Catarrhalis* for eighteen and the *Bacillus Influenza* for only nine.

# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - - Editor

ASSOCIATE EDITORS—C. W. REYNOLDS, C. C. GODDARD, HUGH B. CAFFEY, O. P. DAVIS, W. E. CURRIE, ARCH D. JONES, K. P. MASON, H. N. MOSES, C. S. KENNEY, D. R. STONER, J. A. DILLON, W. F. FEE.

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A report has just been received of the death of Dr. William L. Rodman, President of the A. M. A., at Philadelphia, March 8.

—R—

### The Stormont Library.

There are some members who have forgotten and there are others who have never known that the Kansas Medical Society is the possessor of quite an extensive medical library. It has been accumulating for twenty-eight years, and at the present time consists of fifteen hundred volumes.

In the transactions of 1886 we find a recommendation by the Nominating Committee that "there be appointed a special committee of three to report to the Society at an early hour the propriety and advisability of securing some suitable place for a library for the Society." The recommendation was adopted, but there is no record of the report made by that committee. Another Committee on Library was appointed in 1887, and in 1888 this committee made a report recommending that "the sum of \$10,000 be raised for a medical library, and that this library be located in the State Capitol and be under the same rules and regulations as the State Library." In connection with this report there was presented the following communication from Mrs. Stormont:

"Whereas, My late husband, David W. Stormont, had been for many years before his death prominently connected with the medical fraternity of Kansas, and particularly devoted to and interested in the prosperity, progress and usefulness of the Kansas Medical Society, I being desirous that his name shall continue to be associated with the medical fraternity of the state and with said Kansas Medical Society; to that end and for that purpose I hereby give and bequeath to the State of Kansas, in trust, for the uses and purposes herein-after named, the sum of \$5,000 in money, and I hereby direct my executors, named in my will, A. D. 1888, as soon after my death as may be practicable, to pay over said sum of \$5,000 to the treasurer of the State of Kansas, which money shall constitute a perpetual endowment fund, to be known as the Stormont Medical Library Fund."

The gift of Mrs. Stormont was gratefully accepted by the Society and a committee was appointed to aid in carrying out its provisions. At the next session of the Legislature the custody of the Stormont Medical Library was assumed by the state. In order that the Society might have the immediate benefits of a library, Mrs. Stormont made further donations in money and the purchase of the new library was begun. A considerable nucleus was thus established, and to this has been added such new books as have been published from year to year.

Dr. D. W. Stormont was one of the medical pioneers of Kansas, coming to the state in 1862. We find his name among those elected to membership in the Kansas Medical Society in 1866. His interest in medical organization was apparently promptly recognized, for he was elected secretary of the Society at that meeting. He served in this capacity for ten years, and in 1883 he was made president. From the time he became a member until his death in 1887 the name of Dr. Stormont appears in the transactions of the Society in connection with every movement for the advancement of medicine in Kansas.



### Preparation for "Preparedness."

You and I are not in position to determine the present adequacy of our army and navy to protect the country against invasion by hostile people. We are not in position to determine the number of millions that will be required in preparation for defense. We are mostly willing to trust the solution of these problems to those who have been chosen to represent the people in Congress. In their wisdom and loyalty and integrity lies the only protection the people have against unnecessary and oppressive taxation and against unnecessary sacrifice of human lives either in war or in the evasion of war. Like the millions who, in this great world war, have offered themselves in sacrifice to the lust for power and the greed for gain, you and I will have no voice in the councils which determine the peace or belligerency of our country. When war is declared and the call to arms is flashed over the wires that enmesh this peaceful land, the medical profession will take its place in the line of duty. It is a call of humanity to which no true physician fails to respond. It is the call of our country's need which no loyal citizen will deny.

Physicians are mostly peaceable and peace-loving citizens, but they play a most significant part in time of war. Although belonging to the noncombatant class, the medical department of the army has become of vast importance in the prosecution of a successful campaign. To it is intrusted the health and the physical fitness of the men for duty, upon which may depend the successful outcome of war; and to it is intrusted the salvage of the wrecks and derelicts—the reconstruction of the dismembered soldiers, the conservation of the remnants of men for some useful purpose in the rehabilitation of a war devastated land.

The economic importance of thoroughness and efficiency in the army medical service was very apparent in the Japanese war with Russia and is being demonstrated on every battlefield in the great war in Europe. Thoroughness and efficiency can

only result from careful and systematic preparation and preparation requires time. When war is declared time is allotted in emergency rations—half the minimum requirement for the work to be accomplished. Although the regular medical organization of the army is efficient for the service as it stands, it is entirely inadequate for the requirements in time of war. In the event of war there will be a great demand for trained medical officers. Only partial provision has been made for such an emergency, and it is generally recognized that in the reorganization of the army a large addition should be made to the medical department. No matter what additions may be made to the regular establishment, there must always be in time of war the necessity for immediate and considerable expansion.

It is improbable that the present provision for a reserve medical corps will meet the requirements and the Southern Medical Association adopted resolutions requesting that the number of regular medical officers be increased and that provision be made by which physicians in civil life might receive the necessary training and be subject to call for service in the reserve medical corps in time of need. Other medical organizations, among them our own, have adopted similar resolutions. No effort on the part of the medical profession should be spared to prevent a second failure to adequately provide for the sick and wounded, such as that which gave rise to the indignant protests of the nation at the beginning of the Spanish-American War.

The President, who has succeeded in evading several very excellent opportunities for war, is an ardent advocate of "preparedness"—a very significant fact, one might say, in view of his exclusive knowledge of our diplomatic relations with other nations.

While still basking in the sunshine of peace it is well to remember that war clouds grow with amazing pace, and those of the medical profession who are ambitious to serve their country will do well to acquire as much knowledge of military surgery as opportunity permits, and to



take advantage of whatever may be offered by the War Department in the way of special training for physicians in civil life.

What may be called a preparation for "preparedness" has recently been inaugurated by the appointment of a commission to study first aid problems, with the object of standardizing the methods, material and equipment employed in the administration of first aid to those injured in the pursuit of industrial occupations and in war.

The First Aid Conference met in Washington last August, and at this meeting resolutions were adopted, recommending that the President appoint a "Board of First Aid Standardization."

"President Wilson announced on November 9 the appointment of such a commission, whose membership represents eight technical medical and relief organizations. The personnel of this commission is as follows:

Colonel Louis A. La Garde, United States Army, retired, representing the Army; Major Robert U. Patterson, representing the Red Cross; Surgeon A. M. Fauntleroy, representing the Navy; Assistant Surgeon General W. C. Rucker, representing the U. S. Public Health Service; Dr. A. Shelton Horsley, of Richmond, Va., representing the American Medical Association; Dr. S. C. Plummer, of Chicago, representing the American Association of Railway Surgeons; Dr. John P. Kaster, representing the American Association of Railroad Chief Surgeons; and Dr. Richard A. Harte, of Philadelphia, representing the American Surgical Association.

This commission will investigate first aid methods, packages, the standardization of first aid equipment and an identical course of instruction to be followed throughout the country, and will report on these subjects to the American First Aid Conference. The president of this conference is Gen. W. C. Gorgas, Surgeon General of the United States Army, and the vice-president is Rupert Blue, Surgeon General of the United States Public Health Service."

Every state society has been requested to appoint a first aid committee to co-operate with the board. This committee is expected to conduct a survey in the state and report upon the administration of first aid as found in the railroads, mines and factories. The following circular letter has been sent to such first aid committees as have been appointed:

February 24, 1916.

The secretary was authorized by the conference to make the survey. These national and state committees have been appointed to assist the secretary in this investigation.

The Board of Standardization has been requested that these first aid committees make their report to the secretary of the conference.

Reprints have or will be sent you from the Military Surgeon, Surgery, Gynecology and Obstetrics, for January, 1916, and one soon to be published in the Journal of the American Medical Association. These contributions outline the methods of investigations.

State committees might confine their attention to a survey of the actual conditions of first aid and accident surgery in the railroads, mines, and industries in their respective states. Attention should be concentrated on a system of bookkeeping and records which will demonstrate the economic value of first aid instruction and material and improved methods of surgery. The exact period of disability needs thorough study in this country.

Every surgeon interested in this movement can be helpful to the state committee by co-operation in this investigation.

Officials of railroads, mines and manufacturers should co-operate.

Committees representing national associations should make a survey of the opinions of their colleagues and if possible standardize the best methods employed in accident surgery.

In many instances first aid by the layman is not necessary because the injured patient can be readily transported to an accident room or to a hospital. This is especially true in mines and industries, and perhaps in accidents occurring in cities near hospitals.

In some instances first aid must be performed by the layman and the question is, what shall they be taught, and what material shall be provided and how shall it be distributed?

In other instances, the first treatment of the wound on account of the environment of the accident cannot be much more than simple disinfection, dressing and fixation, even if the patient is seen at once by a physician or surgeon.

The object of this survey is to collect the actual facts and provide for improvement of future records so that progress may be more rapid. Very truly yours,

JOSEPH C. BLOODGOOD.

—————R—————

### **Soldiers of Common Good.**

The man who invents an electric light, a new automobile, a method of wireless telegraphy or a wireless telephone system not only reaps a golden harvest but is at once lifted upon a pedestal and worshipped by the many.

That is all right. Any man who gives

to the world an improvement, who aids in eliminating distance and in overcoming the obstacles of ages is a public benefactor and should be honored, but what we lack is the ability to discriminate. We are too apt to be led away by the showy and forget the practical. We are more interested in the noise made by a cannon than we are in the results of the shot twelve miles away.

The veriest schoolboy can tell you about Edison or Marconi. How many of them know whether the name of Dr. Ehrlich stands for a patent breakfast food or a corn remedy? Men have labored for years in the laboratories, have given to the world all that is theirs and gave it for the common good and they have passed away unrecognized except by the few and unknown to the many.

Soldiers of and for the common good were they. They gave their lives for humanity, died unrewarded and the busy world has forgotten them, in case it ever knew.

Diphtheria has been mastered, hydrophobia has lost its terrors, typhoid fever can be prevented. These are but few of the victories won. They have been won by scientists who were laboring, not for self, but for you and me and the other fellow and yet have we ever thought to keep alive their memories, or to place a flower upon their graves?

Soldiers for the common good, known and unknown, you have served us well and we salute you.—From the Norton Daily Telegram.

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## SOCIETY NOTES.

### BOURBON COUNTY SOCIETY. . .

At the regular meeting of the Bourbon County Medical Society, February 21, a paper was presented by Dr. Hopper. Subject, "Diphtheria—Use of Antitoxin, Anaphylaxis, Carriers, Immunity and Susceptibility." The following is a brief summary:

1. Liberal dose of antitoxin should be given in every case of diphtheria, as the probability of post-diphtheritic palsies are

in direct proportion to the ratio as to the time of administration and the amount of the dose.

2. That the administration of small doses of antitoxin with hope of producing immunity is not good practice, as it does not immunize against the organism and the effects of its presence beforehand to neutralize the toxins as they may be developed lasts but a few days, and the danger established for a second dose of serum which may have to be given later does not justify its use. A much better procedure is to watch carefully all exposed persons who are known to be immune by recent blood examination. Give careful attention to antiseptic nose and throat toilet and keep at hand a liberal amount of antitoxin to be given at once if symptoms of diphtheria develop.

3. That anaphylactic shock is no longer longer a danger that cannot be determined in time to prevent serious effects.

4. That immunity and susceptibility may be determined by modern methods, and lastly that carriers may be rendered free of the infection, not by the use of antitoxin, but with the proper use of antiseptics and bacterin injections.

The doctor, in this paper, mentioned that experimenters had worked out an interesting method of producing immunity against the toxins by injecting live bacteria in increasing doses with a corresponding amount of serum in decreasing doses.

The practice of injecting live bacteria was condemned by the doctors present in their discussion. It was contended that there was danger of the culture not being pure and that there might be a culture of live streptococci introduced.

It was also mentioned that the intravenous introduction of serum was to be preferred, as it acted at once, while the subcutaneous and muscular administration required from twelve to forty-eight hours to absorb the full dose administered.

A report on current medical topics is a feature of our regular meetings that is always of much interest to those present.

Dr. W. A. Miller, of Uniontown, was the

only member from out of the city present at the meeting.

At the social session cigars were conspicuous (?) by their absence. Dr. Payne does not encourage the use of the weed, but valiantly endures when his colleagues "smoke up."

Dr. C. F. Hurrer, county and city health officer, will leave in a few days for Chicago for some post-graduate work.

JOHN C. LARDNER, Secretary.

#### LEAVENWORTH COUNTY SOCIETY.

The following is the program for the year prepared by the officers of the Leavenworth County society. Dr. J. L. Fryer is president, Dr. A. J. Smith, vice-president, and Dr. J. L. Everhardy, secretary-treasurer.

##### JANUARY 10.

Election of Officers.

"Diphtheria," Dr. J. H. Langworthy.

"Therapy of Syphilis," Dr. P. B. Matz.

##### JANUARY 24.

"Action of Epinephrin, Pituitrin and Strophanthin on Heart Muscle," Prof. S. A. Mathews, Kansas University, Lawrence.

##### FEBRUARY 14.

"The Naso-pharynx as Mode of Entry in Infectious Diseases," Dr. J. L. Fryer.

"Results of Surgery Compared with Results of Internal Medicine," Dr. A. J. Smith.

##### FEBRUARY 28.

"Treatment of Inoperable Carinoma Uteri," Dr. C. J. McGee.

"Newer Conception of Cancer," Dr. C. C. Nesselrode, Kansas City, Kan.

##### MARCH 13.

"Perinæorrhaphy," Dr. S. B. Langworthy.

"Prostrating Forms of LaGrippe," Dr. J. L. Everhardy.

##### MARCH 27.

"Vaccine Therapy of Typhoid Fever," Dr. P. W. Darrah.

"Vaccine Therapy," Dr. L. S. Milne, Kansas City, Kan.

##### APRIL 10.

Goitre—"Medical Treatment," Dr. C. M.

Moates.

"Surgical Treatment," Dr. J. W. Risdon.  
APRIL 24.

"Treatment of Fractures," Dr. W. S. Sutton, Kansas City, Mo.

##### MAY 8.

"Some Observations in Diagnosis and Therapeusis of Heart Disease," Dr. W. A. Adams.

"High Blood Pressure for Diagnostic Purposes in Private Practice," Dr. D. R. Phillips.

##### MAY 22.

"Physiology of the Thymus Gland," Dr. F. B. Taylor.

"Internal Secretions," Dr. W. W. Duke, Kansas City, Mo.

##### JUNE 12.

"Diarrhœal Diseases of Children," Dr. C. M. Brown.

"Abortive Fever," Dr. E. E. Biart.

##### JUNE 26.

"X Rays as Diagnostic Aid," Dr. E. H. Skinner, Kansas City, Mo.

Meeting called at 8. P. M., at the Elks' Club.

#### WYANDOTTE COUNTY SOCIETY.

The Wyandotte County Medical Society met in the Mercantile Club rooms Tuesday evening, February 15. The program consisted of a symposium on influenza and papers were read on its "History and Pathology" by Dr. Fulton, on its "Diagnosis and Treatment" by Dr. Spake, and on its "Complications and Sequella" by Dr. Sterrett.

#### NORTHEAST KANSAS SOCIETY.

The Northeast Kansas Medical Society met in Kansas City, Kan., on Thursday, February 24, at the Mercantile Club rooms. The attendance was rather small, but those who were present were exceptionally well entertained. As this was the annual meeting the following officers were elected for the ensuing year: Dr. J. F. Hassig, Kansas City, president; Dr. A. B. Jeffrey, Topeka, vice-president; Dr. J. L. Everhardy, Leavenworth, secretary-treasurer. The following program was submitted:



## PROGRAM.

1. "The Early Serum Treatment of Diphtheria," Dr. Frank C. Neff, Kansas City, Mo.
2. "Physical Exercise in the Treatment of Club Foot," James Naismith, Lawrence.
3. "Treatment of Inoperable Carinoma of the Uterus," C. J. McGee, Leavenworth.
4. "Missouri Valleyitis," E. T. Shelley, Atchison.
5. "Neurasthenia and the Rest Cure," L. L. Uhls, Overland Park.
6. "Therapy of Syphilis," P. B. Matz, Leavenworth.
7. "Dyspituitarism" — Illustrated, L. S. Milne, Kansas City.
8. "Vitamines and Their Relation to Disease," Prof. John Sundwall, Kansas University.

The visiting members were entertained at dinner at the Grund Hotel by the Wyandotte County Medical Society. The next meeting will be held in Leavenworth on the last Thursday in October.

## MIAMI COUNTY SOCIETY.

The Miami County Society held its monthly meeting at the State Hospital, Osawatomie, Kan., on the afternoon and evening of January 28, 1916.

The program was opened by a surgical clinic in the operating room of the State Hospital, given by the courtesy of Dr. J. G. Sheldon, of St. Marys Hospital, Kansas City, Mo., assisted by Drs. Rice and Longenecker of the same city. Four major operations were performed. At five o'clock luncheon was served, after which the society visited different parts of the hospital and were spectators at one form of diversion offered the mentally afflicted, the weekly dance, in which all patients of suitable condition participated.

The remainder of the scientific program was then given as follows:

1. "Presentation of a case of Idiopathic Myxoedema in which a psychosis developed, with mental recovery and marked physical improvement under administra-

tion of thyroid gland extract," Dr. Philip B. Newcomb, State Hospital, Osawatomie.

2. "Acidosis in Children," Dr. L. A. Van Pelt, Paola.

3. "Intercostal Neuralgia," Dr. J. J. Harrington, State Hospital, Osawatomie.

4. "Two Unusual Cases of Hookworm Disease," Dr. B. F. Frazer, State Hospital, Osawatomie.

The following officers were elected for the year 1916:

President, Dr. L. A. Van Pelt, Paola; vice-president, Dr. J. W. Kelley, Louisburg; secretary-treasurer, Dr. Philip B. Newcomb, State Hospital, Osawatomie; censor, Dr. J. D. Walthall, Paola.



## PONIES.

Have you a little mayo in your town?

The late "chicken" catches the germ.

The days for work; the nights for love and obstetrics.

It's a short lane that has no mudhole.

A husky suckling makes a fine bust developer.

No doctor is as wise as he tries to look before the camera.

Some doctors have a hound's scent for the honeymoon trail.

Experience is everybody's university; but the fool never graduates.

A man is as old as he feels; a woman is as old as she looks to her doctor.

A fool is born every minute, breech presentation, with foot in the mouth.

The man who boasts of being self made usually bears the tool-marks of coarse work.

Diagnostic point: A hog grunts when he feels good. A man grunts when he feels bad.

The "Birth of a Nation" seems to be attended with a good deal of dystocia in Kansas.

A quack, like the poet, is born, not made; and he never can grow out of it.

Some people are so modest that they are frightfully shocked by the naked truth.

There was an old woman who lived in a shoe.

She had so many children! (She didn't know what to do.)

A good many have said kind things of the Corral; and some have said the opposite. Thanks to them all for reading the stuff.

The medical hog guages his success by the number of patients he can "see" in a day.

A protuberant abdomen goes further than a massive cerebrum in the eyes of the laity, when it comes to judging medical men.

The stork often flies with a crippled wing,  
Or comes on a crutch, with one leg in a sling.

Many doctors stay away from their medical society meetings because they are afraid they will be run over by a train of thought.

A good patient is one who sticks to his doctor till one or the other of them dies.

Now that we are having tuberculosis days, cancer days, baby days, etc., etc., why not have a Sore Toe Day?

The reason the hod-carrier's union is more effective than the medical organization is because it is cohesive, and can deliver the solid vote of its members to the political party or candidate that will give what is asked.

\* \* \*

VEST POCKET ESSAYS.

### The Breast.

The breast is a portion of the bodily structure of different significance according to the sex to which the term is applied, and according to the person,—physician,

poet, lover, child—by whom the term is used.

Most generally the word carries with it the thought of woman. Indeed, the breast is the very symbol and badge of femininity. Song and romance dwell feelingly on the female bosom, and associate the most tender sentiment and inspiration with its rhythmic movements. Artists of brush and chisel give stress to this important feature in all their delineations of heroine and madonna.

The masculine figure is portrayed in its majesty of bone and brawn, but woman is ever pictured and idealized in those soft curves that suggest and symbolize maternity. And enduring art is here, as always, consistent with life and experience. For the bosom of woman is the residence of one of her most forceful charms. Here Nature, with the masterful strokes of a divine artist, builds those sweet and gentle convexities which rise and fall with every soft breath of her gentle life, and which so strongly appeal to the eye of her restless mate.

Hère lie those succulent fountains to which, under the stress of primal necessity, the infant diligently applies himself. He not only assuages his hunger, but also pillows his weary head, quiets his petty griefs and takes refuge from every terror against the same soft hemispheres.

The virgin modestly and artfully conceals the alluring rotundities of her figure, but the matron proudly uncovers to her voracious offspring the tender fountains of its waxing strength. And the mother of strong men, grown weary of the burdens of life, fondly presses them to her withered bosom whenever, as of old, they return to her embrace.

Thus may we truly say that the breast of a woman is the seat and source of man's emotions and the sanctuary of his tribulations. What mysteries of life and development lie at these portals! What potencies for good and evil flow through these channels! O, you men of the flat and barren bosom! O, you fathers, of the whiskered face and chest! You may breed

into your progeny some of your masculine instinct by the single impress of your passion. But the maternal bosom will be potent to instill, day after day, the immortal and controlling impressions. Thus may we well believe that from the father come the transient and from the mother the permanent and superior attributes of the soul.

\* \* \*

### Among the Wyandottes.

Not long ago I attended the annual round-up of the Wyandotte County Medical Society, at Kansas City, Kan., as that town is now called. I was one of several mavericks who happened to be browsing in that range, and got caught in the drive. The occasion is, I think, worthy of mention here, and the spirit that abounded there is worthy of emulation by every similar society organization in Kansas.

There was, of course, something to eat. They called it a banquet, I believe, but it lacked nearly all the features that usually characterize a banquet, namely, formal, set speeches, prim, precise, punctillious, pretentious, prudish performances, with a feeling of relief and damitall when it is over.

Not so at this doings, dearly beloved. There was something to eat, as I was saying. You may be assured of that. These Wyandotte cowboys are great providers, as I have taken occasion to remark in these columns before. They recognize the primordial instinct ever assertive in vertebrate and invertebrate, that of ingestion. And they do not try to break away from the primitive social custom of eating *en masse*. Somehow, the human animal cannot get away from the old habits, formed ages ago, when, as cavemen, they used to crouch around their campfires and gnaw bones together with mutterings of mutual satisfaction.

I sometimes think that eating is one of the most vulgar practices to which mankind is addicted, and that instead of being publicly indulged in it should be relegated to places of privacy along with all the other peculiarly bodily functions and min-

istrations. But as it still is in good form to eat collectively, I can testify that this Wyandotte feast left nothing to be desired by the most fastidious epicure. A list of the things on the meanyou will be sent by parcel post on application to the secretary.

Some of the most notable features of the event were the large turnout of the membership and the informality and abandon with which every one entered into the spirit of the thing. Every fellow left his dignity outside in his ford. Dress suits were not in evidence. I did see one or two, worn by mistake or inadvertently. No women were present. No reflection on the ladies, bless their dear hearts! But it is refreshing, once in a while, to attend a purely masculine function where one can put his feet not only under the table, but even on top of it if that will give relief. I presume the Wyandottes have some lady members. If so, they were perhaps away somewhere holding a scream of a meeting of their own.

The mingling of the sexes is all right; enjoyable, beneficial, indispensable. We have it in family, school, church, lodge, business, politics and everywhere. We would not have it otherwise. But can't we have, occasionally, some such wholesome stag gatherings as this, where we can disport ourselves just as if we were boys in swimming down on the creek in some shady pool? Such relaxation is indeed rest.

There wasn't any of the cut-and-dried speech-making down there, as I have already intimated. The poseurs, if present, assumed other roles. Instead of these obsolete forms of entertainment a mock trial was put on, and a very effective burlesque of our American jury system, expert witnesses and bully-ragging lawyers skillfully played.

There wasn't an old boy in the crowd. True, there was Sawtell, with his capillary penury, and Goddard, with his abdominal plenitude, as well as others with premature canities. But nobody noticed these anomalies of form or feature. "We're



twenty! we're twenty! who says we are more?"

And after all was over, we pulled ourselves together regretfully, to take up again the humdrum and burden of everyday life, yet all the better and more refreshed for the happy relaxation of such an evening.

## BOOKS.

### Obstetrics.

A Practical Text Book for Students and Practitioners. By Edwin Bradford Cragin, A.B., A.M., (Hon.) M.D., F.R.C.S.; Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University, New York; Attending Obstetrician and Gynecologist to the Sloane Hospital for Women; Consulting Obstetrician to the City Maternity Hospital. Assisted by George H. Ryder, A.B., M.D., Instructor in Gynecology, College of Physicians and Surgeons, Columbia University, New York; Assistant Attending Obstetrician, Sloane Hospital for Women; Associate Surgeon, Woman's Hospital, New York. Octavo, 558 pages, with 499 engravings and 13 plates. Cloth, \$6 net. Lea & Febiger, New York.

Obstetrics is one of the subjects upon which one can always get a hearing with the general practitioner. It is the one subject upon which he is always ready to listen and always ready to talk. It constitutes a considerable and lucrative part of his practice. It gives to him an intimate relationship with the family that has done much to perpetuate the family physician as such. It is therefore quite natural that he should be ready to compare his with the experiences of others.

One who is a careful and conscientious observer and who writes from an unusually large experience finds his readers eagerly awaiting him. Dr. Cragin has for years been the medical head of the Sloane Hospital for Women where there are more than eighteen hundred deliveries annually. Certainly this has been an exceptional opportunity for observation and investigation. As should be expected, the author has given the reader the benefit of this large experience, and has followed closely the methods in use at the Sloane Hospital with the results obtained there. The first part of the book is devoted to the anatomy of the female generative organs and to embryology and physiology. In the second part the following general

subjects are discussed: Physiological Pregnancy and its Management; Pathological Pregnancy; Pathological Labor; Obstetric Surgery; Pathological Puerperium.

The Clinics of John B. Murphy, M.D., Volume V No. I (February, 1916).

At Mercy Hospital, Chicago. Volume V No. I (February, 1916). Octavo of 194 pages, 33 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8. Cloth, \$12.

The February number of Murphy's Clinics has just been received. We would call attention particularly to several groups of cases reported in this number which are of especial interest. In the first group we find: Ulcer of Duodenum—Duodenorrhaphy—Posterior Gastro-jejunostomy by Button Method; Volvulus of Jejunum—Untwisted—Gastric Ulcer at Pylorus—Posterior Gastro jejunostomy by Button Method; Peridiverticulitis of Sigmoid—Incision and Drainage; Intestinal Obstruction—Release of Gut—Colostomy and Entero-Anastomosis by Two-Stage Method of Mikulicz. The next group is made up of operations on the spine. Luxation on Third Lumbar Vertebra with Compression of Cauda Equina—Spinal Decompression; Fracture—Luxation of Second Lumbar Vertebra with Compression of Cauda Equina—Spinal Decompression; Tuberculosis of Thoracic Spine with Compression of Cord—Decompression of Cord. Then there are a series of cases of hip-joint diseases with operations. Elongation of Capsule of Hip-joint—Immobilization in "Frog" Position; Ankylosis of Hip-joint—Arthroplasty by the Fat-fascia Flap Method; Ancient Tuberculosis of Hip-joint—Arthroplasty—Tenotomy of Adductors; Ancient Tuberculosis of Hip-joint with Pathologic Luxation of Femur—Tenotomy of Adductors; Ancient Metastatic Bacterial Synovitis of Hip-joint with Adduction Deformity—Tenotomy of Adductors—Tenotomy of Ilioposas—Stretching by Manipulation.

A series of operations on the knee constitutes the next group. Traumatic Rupture of Internal Lateral Ligament of Knee-joint—Syndesmorrhaphy; External Luxa-

tion of Patella with a Foreign Body in Knee-joint—Removal of Foreign Body—Imbrication of Vastus Internus Aponurosis; Bony Ankylosis of Knee-joint—Three Stage Operation of Arthroplasty; Two cases of Hypertrophic Villus Synovitis of Knee-joint—Synovial Capsulectomy; Ankylosis of Knee-joint Following a Furuncle—Arthroplasty.

## THERAPEUTIC NOTES

### Annual Report Battle Creek Sanitarium for 1914.

Physicians, generally, may find something of interest in the annual report of the Battle Creek Sanitarium for 1914.

An excerpt from the report follows:

The year 1914, like almost every preceding year in the history of the institution, showed marked advancement. Notwithstanding the depressing effect of the war, and the financial disturbance resulting, the number of patients treated was practically the same as in the previous years.

The following comparative table shows the growth in the principal departments of the work:

	1913	1914
Laboratory examinations .....	35,274	40,050
Special examinations.....	12,124	15,120
Special treatments.....	255,106	272,951
Major surgical operations .....	624	638

The financial report shows net earnings amounting to \$252,723, of which \$152,041 were expended for charity, the remainder being devoted to the cancellation of debts and necessary improvements. It is proper to add just here that the institution is not conducted for profit and that there is no division of net earnings, as the institution is incorporated under a statute provided for charitable and philanthropic organizations.

The increasing appreciation of the work of the institution by members of the medical profession is shown by the fact that the list of patrons for the year includes 185 physicians, 35 more than the preceding year.

Of numerous improvements made during the year, the most important was the construction of a fire-proof hospital building.

When he took charge of the sanitarium it was known by the cumbersome title, "The Western Health Reform Institute." The first act of the young superintendent was to discard the awkward name and rechristen the institution "The Battle Creek Sanitarium." During the half century, more than 100,000 patients have been treated at Battle Creek.

### It Pays the Manufacturer to Maintain Ethical Standards.

The notice of the removal of the Dextri-Maltose manufacturing plant from Jersey City to Evansville, Ind., published in one of our advertising pages, deserves more than passing attention. It furnishes evidence of the natural growth of a manufacturing enterprise which is now vacating its old factory with 18,000 square feet of floor space for a new location in the Central West and in a new plant with 300,000 square feet of floor space—sixteen times larger than the old one.

This removal from a comparatively small to a very large housing also affords striking proof that success awaits the manufacturer who produces something the physician really wants, and markets his products in accordance with the standards set up by doctors for the sale of products they use. The first commandment for the direction of the manufacturer under these standards is: "Thou shalt not offer to both physician and public, by advertising or otherwise, anything which requires medical skill to properly use."

This commandment has been ignored by some manufacturers of infant foods, who have persistently educated the public with pseudopediatrics, thereby tending to increase infant mortality and hampering the physician in the practice of scientific, or even rational infant feeding.

But ultimate reform in the manufacture and sale of infant foods was as inevitable as the reform that has taken place in the sale of pharmaceutical products. The day



of mystery and tradition in infant feeding is passing rapidly.

The recent simplification of bottle feeding, rendering it possible, without impractical complication, for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction of infant feeding is distinctly the proper work of the physician.

This conviction has in turn created a demand for forms of carbohydrate foods which can be freshly prepared in exact proportions to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the administration of the food.

The firm, which announces herewith its removal from the East to larger opportunities in the West, early recognized the requirement by the medical profession for a product used in infant feeding, made and sold exclusively for physicians, with no appeal, nor information to the public.

This firm deserves no special commendation for the course it has pursued, it being its duty to follow it. Reference to the sales of Dextri-Maltose is made simply to show that it is remunerative for manufacturers to treat the medical profession fairly.

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#### **Powerful Antiseptic and Disinfectant.**

A solution of Parke, Davis & Co.'s Germicidal Soap containing 1:500 mercuric iodide, the active ingredients, destroys pus-producing micro-organisms in less than five minutes. The soap has been tested with pus, cholera, typhoid and diphtheria germs, and anthrax spores, and in hundreds of experiments none of the germs survived two minutes. The tests referred to were made with solutions representing but one part of the antiseptic material in each five thousand parts. In proportion to the amount of antiseptic contained, this soap is held to be the most powerful germicide and disinfectant available. The assumption is based upon comparative tests with other well-known antiseptics.

It is apparent from the foregoing that

Germicidal Soap, P. D. & Co., has a wide field of usefulness in medical and surgical practice. Obviously it is more than a soap, more than a germicide. Indeed, as one writer has said, it is an antiseptic, a disinfectant, a cleanser and a lubricant in one. It is serviceable for sterilizing hands, instruments and sites of operations; for lubricating sounds, specula, etc.; for vaginal douching, as it tends to dissolve pus, blood and mucus, whereas most other germicides coagulate them; as a disinfectant wash after attendage upon cases of communicable disease; in the treatment of skin infections of parasitic origin; for cleansing surface lesions associated with fetid discharge; for neutralizing the odors of offensive perspiration; for shampooing the scalp and hair; for the destruction of parasites; for sterilizing bed-linen and cleansing cuspidors, bed-pans and other utensils of the sick-room. In short, wherever a powerful antiseptic, disinfectant, detergent or deodorant is needed, Germicidal Soap, P. D. & Co., would seem particularly applicable.

Germicidal Soap is supplied in two strengths, containing, respectively, one per cent and two per cent of mercuric iodide. If a cake of the latter be rubbed in water until a heavy lather is formed, the solution will be approximately 1:5000. The soap has an important advantage over most other powerful antiseptics in that it does not coagulate albumin or corrode nickled or steel instruments.

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#### **Serobacterius.**

Having already established laboratories for the production of smallpox vaccine, the H. K. Mulford Company was prepared to consider the production of diphtheria antitoxin, and was the first house to place the product on the market commercially in the United States. From this beginning, the growth of the biological business conducted by the H. K. Mulford Company rapidly increased, and tetanus antitoxin, antipneumococcic serum, antistreptococcic serum and other anti-microb eserums were added to the list of biological products.



Then Sir Almroth E. Wright, of the British Army, introduced his revolutionary method of treating infectious diseases and immunizing against them with bacterial vaccines, and the result is well known to the profession. Typhoid fever has virtually been eliminated from the armies of the world by the use of bacterial vaccines, and many other infectious diseases are yielding to preventive and curative measures that two decades ago were killing their thousands and tens of thousands.

The Mulford Company were also the first to prepare these bacterial vaccines commercially in the United States and by their system of bulletins materially aided the profession in their introduction throughout the world. The H. K. Mulford Company were also the first to adopt the method of Besredka for producing sensitized bacterial vaccines which they are supplying under the name "Serobacterins" to distinguish them from the sensitized vaccines produced from living cultures, also employed by Besredka, but not suitable for commercial introduction, owing to the possible danger of producing carriers or in some other way spreading the infection.

The drop in diphtheria mortality from 44 per cent before the introduction of diphtheria antitoxin to 12 per cent after the antitoxin had become generally employed was considered marvelous, but now that typhoid fever is under control, and plague, cholera and other infectious diseases are also being placed under control by the immunizer, and epidemic cerebrospinal meningitis has largely lost its terrors, we no longer regard the diphtheria antitoxin statistics with the same degree of surprise.

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### **National Conference on Charities and Corrections.**

Health conditions will be linked with nearly every phase of the problems of charity and correction to be considered at the forty-third annual meeting of the National Conference of Charities and Correction at Indianapolis, Ind., May 10 to 17. One section, that on health, will be devoted

entirely to a discussion, by physicians, of the part the medical practitioner and surgeon may play in social work.

Dr. J. N. Hurty, secretary of the Indiana State Board of Health, is chairman of the section on health and Dr. Theodore B. Sachs, of the Municipal Tuberculosis Sanitarium of Chicago, is vice chairman. In the general session devoted to subjects of wider popular interest, Dr. Eugene L. Fisk, director of hygiene of the Life Extension Institute, New York, and Professor L. J. Rettger, of the Indiana State Normal School, will discuss longer and more effective living.

In the section meetings there will be a symposium on disease, ill health, and sickness, and their bearing upon crime, insanity, and poverty. The speakers will be Dr. David C. Peyton, superintendent of the Indiana Reformatory, and Dr. S. E. Smith, superintendent of the Eastern Hospital for the Insane, at Richmond, Ind. Dr. E. R. Hayhurst, of the Ohio State Board of Health, will lead a discussion of industrial hygiene. The relation of venereal diseases to public and individual health will be considered by Dr. C. S. Woods, superintendent of the Methodist Hospital, Indianapolis, and Dr. William F. Snow, secretary of the American Social Hygiene Association. A number of dental surgeons will also participate by giving their views on the relation of oral hygiene to public and individual health.

Other sections allied in subject matter to that on health will take up the problem of inebriety and the relation of feeble-mindedness and insanity to social questions. The former division of the conference will make a distinct contribution by presenting the results of an inquiry among large employers as to the results attained from their prohibition of drinking among employes.

A broad field of community problems will be covered by six other sections of the conference. That on the family and the community will take up the co-ordination of civic effort in small communities. In its general session it will consider conditions

adverse to efficient public work under democratic government.  
tion of social workers' programs to the community in general.

The growing tendency to put relief work in the hands of public agencies will occupy much of the attention of a section on public and private charities. Problems connected with the organization and administration of charity work and the keeping of proper records will also be discussed.

The conference will be opened on the evening of May 10 with an address by the president, Father Francis H. Gavis, in which the keynote of the entire gathering will be struck. A talk of exceptional public interest will also be given at this inaugural session by Ernest P. Bicknell, director of civilian relief of the American Red Cross. Mr. Bicknell will discuss war relief and his own experiences close to the firing lines in the various European war zones.

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### **Alienists and Neurologists**

The Chicago Medical Society announces the fifth annual meeting of Alienists and Neurologists of the United States, to be held under the auspices of the Chicago Medical Society, June 19 to 23, 1916, at La Salle Hotel.

We wish to invite you to attend these meetings and participate by paper or take part in the discussion of the various subjects and other matters that may come before the conference. We hope to enlist your valuable assistance in a campaign of education of physicians and the public as to the causative forces of mental deficiency and will appreciate your assistance. As physicians and the public have taken great interest in these meetings the Chicago Medical Society, even though at great expense, has decided to continue these annually without expense to others.

Resolutions were passed at the meeting in 1915, requesting the governors of the various states to appoint committees to investigate the causative forces of feeble-mindedness.

The governors and boards of administration or control, are taking great interest

in these meetings and giving us valuable assistance to carry forward this movement. We hope also to interest the editors of the various medical journals in this movement and through them enlist the help of physicians. If a campaign of education were made against the causative forces of mental defectiveness as there is against tuberculosis, a wonderful amount of good would result. This subject should interest us, first, from a humanitarian standpoint, second, from an economic standpoint. The judges of our courts are acquainting themselves with mental diseases; they give us the information that a large per cent of crime is committed by mental defectives and a large percentage of the prisoners in our penal institutions are also defectives and should not have been confined to prisons of this kind, but sent to farm colonies or other reformatory institutions with proper environment. In our state asylums, there are many cases of insanity, which if they had been diagnosed early, could have been cured. This is especially the case as regards dementia praecox and lunatics. The state would not have been burdened with the immense expense of their long confinement and their families would have been relieved of the humiliation of their commitment.

W. T. MEFFORD,

Secretary of Conference,  
2159 Madison Street.

WM. O. KROHN, Chairman,  
20 East Madison Street.

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### **WANTED—FOR SALE—ETC.**

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FOR SALE—Doctor's office fixtures, small drug stock, with desirable small town location. Cheap. Northeast Kansas. Address "E" Journal Kansas Medical Society.

FOR SALE—Static X-Ray machine made by National X-Ray Co., Topeka, Kansas. This machine is new, never having been used. A bargain. Ed. C. Jerman, R. F. No. 1, Topeka, Kan.

FOR SALE—A Victor Finsen Light Apparatus. Will sell cheap. Address Journal Kansas Medical Society, Topeka, Kansas.

# THE JOURNAL

*of The*

## Kansas Medical Society

Vol. XVI

TOPEKA, KANSAS, APRIL, 1916

No. 4

### Future Prospects of Medical Education in Kansas.

ED T. HACKNEY

President State Board of Administration of Educational  
Institutions.

Kansas is alive. She will not long allow it to be said that she is more interested in her live stock than she is in her people. She even now has something of the vision that it is as necessary to have an experiment station to work out the problems of human health at her University as it is to have an experiment station to work out hog cholera, black-leg, and other animal health problems at the Agricultural College.

The experiment station at the college is not only a great research plant to prevent and cure animal ills and save animal life, but it is a great teaching laboratory where the bright young men of the state who are interested in this great economic work, are brought into contact with these problems. It is the training school for those who are to go out and protect the animals. It is the publicity agent and disseminator of information to the whole people, as to prevention and cure of animal diseases.

In the same way should the University Medical School be an experiment station and a research laboratory in the problems of human health. It is a great laboratory and should be even a greater laboratory for the young men of Kansas who are interested in preventing and curing the human ills so expensive to Kansas. It should be and must be so supported that

its great laboratories and libraries will be a constant magnet to draw not only the problems that constantly confront the practitioners of the state, but will draw each of those practitioners to it for longer or shorter stays, at least once each year. It must not only be a school for the training of young men to be doctors, but must constantly assist those who are already in the profession to do even better and nobler work than they are now doing. Its pathologists and other experts must ever be ready to render special services along their particular lines. Its laboratories must ever be a place for practitioners to come to study out special problems for the benefit of the health of the state. It must more and more be the publicity agent, the health information bureau to the layman as well as the practitioner.

The state is just beginning to realize the great loss it is sustaining because of the lack of information as to human ills and their causes. Physicians are doing a splendid and noble work in this line. They are doing their best to prevent sickness. No profession has a nobler, more self-sacrificing spirit than the medical profession. The state as a whole loses many millions of dollars every year through preventable diseases. It can well afford to spend a few thousand in building up a great plant at Kansas City, Kansas, the radiating point for all Kansas, where the great work of disease prevention and cure may be increased.

The Federal Government must soon see the need of organized effort along this line, as it has along the line of animal health,



and it will no doubt soon make an appropriation similar to that made to the agricultural colleges for the experiment or research laboratory in connection with the university medical schools.

The gifts of Dr. Bell,, Dr. Robinson, Dr. Barber and others and the recent \$75,000 bequest of Dr. Porter, of Paola, mark the beginning of private gifts that are to come to the institution. Many people are looking forward to the time when they can help the medical school and hospital. They appreciate the fact that it offers splendid opportunity for small monuments, such as endowing a room, a chair or a laboratory, which will bring forth a daily blessing. Others see in it a chance to make large sums do a continuing work for suffering humanity. The splendid work being done for the correction of deformities in helpless children appeals strongly to the philanthropic as it does to all the good people of the state.

Here is the opportunity for doing the greatest possible good to the people of Kansas as a whole. Both the individualist and those who look strongly to the state as a whole realize the great need of disease prevention. The location is one selected by the Carnegie Foundation as one of the great medical centers of the United States. It will undoubtedly receive substantial assistance at the hands of these great organizations supporting the dissemination of health information and the raising of medical standards. It is already profiting greatly by individual donations and bequests and the signs for the future are propitious. It is popular among the people and in the legislature and will fare well there. The Federal Government must soon have its assistance and will pay liberally therefor.

With the funds to properly run the plant and the noble men who are willing to devote their splendid abilities to it, the School of Medicine at the University must soon take its true place as one of the most useful and most popular of the educational activities of the state. It will win.

## Medical Teaching and Its Future.

CHANCELLOR FRANK STRONG,

University of Kansas.

Medical schools are likely to prove to be the most important technical or professional schools of American universities. They are, in my judgment, especially necessary adjuncts of a state university, for the reason that a state in its organized form must be greatly concerned about the physical basis for its general life and its wealth production. In order to secure the good health and the efficiency of its population, to set the standards for the training of persons to administer to the sick and especially the standards for the prevention of disease, a School of Medicine is likely to be regarded as after all one of the most serious considerations in state higher education. The coalition in Kansas of the two agencies most concerned in the health of the state, namely, the School of Medicine and the State Board of Health, is a unique arrangement which if carried out without hindrance ought to prove of the very greatest value to the state.

The teaching of medicine in an organized school calls for two types of work—that which has to do with the fundamental scientific courses upon which medicine is based, such as physiology, chemistry, bacteriology, anatomy, and others, and that which has to do with the clinical courses intended to carry into practice the general results obtained in the scientific courses just named. Up to the present time it has been conceded that teachers of the fundamental scientific courses should be men and women giving their time exclusively to that type of work. It has been agreed that these people should give themselves to teaching and research from the standpoint of the broad fundamental propositions of the science itself. On the other hand in connection with the clinical work a rapid and profound change has been going on for the last fifteen or twenty years. Formerly the clinical part of medical work was done by men for whom teaching was secondary and the

practice of medicine was primary, to whom, in other words, the commercial side of medicine was the most important. They received little if any salary from the institution with which they were connected. Their recompense came almost entirely from the additional practice and prestige that was theirs from their connection with the school in question. This method was especially adapted to the growth and development of proprietary medical schools, made up almost entirely of practitioners whose first interest was in the practice of medicine.

Experience, however, demonstrated that proprietary medical schools were unequal to the situation and that institutions either privately endowed or supported by the state were the only institutions that were able to support the large expense necessary for the development of the new type of medicine which called for large hospital and laboratory facilities. Experience soon demonstrated also that it was impracticable to use men as teachers in the important courses in internal medicine, surgery, and so forth, who could give but a small fraction of their time to teaching and whose teaching at best was liable to serious interruption through the exigencies of their profession. Therefore some men, in the laboratories of clinical pathology, for example, were set off on a salary to give their whole time to the work and to withdraw from general practice. The same thing happened in regard to administrators of medical schools. These men have been withdrawn largely from the active practice of the profession. The same thing happened again to a smaller degree in such departments as clinical medicine and surgery, when in some schools men were placed on a salary under contract to give at least one-half their time to devote themselves to consultation and other practical work in their profession. At present the movement seems to be going still farther and it may issue in all teachers of the primary departments in clinical medicine being placed upon salary to give their whole time to the

subject they teach and to withdraw from the active practice of their profession.

Evidently there will have to be some centralizing of the practice of medicine. One thoroughly competent and well trained practitioner will have to serve a larger constituency. The number of students in medical colleges has very greatly diminished. At the same time the requirements for successful practice have increased. The cost of necessary office equipment is much greater. There must be adequate laboratory work in connection with the modern doctor's practice. All this requires a more expensive outfit and higher efficiency on the part of the practitioner. How this centralization is to be brought about and what its effect will be are yet to be worked out.

The modern medical school lays much stress upon the ethical side of the profession. It tries to teach the ideal of service, the protection of the patient and honorable dealing in every respect. It lays stress upon the moral character of the practitioner, upon the necessity for educated, cultured gentlemen. The relation of the medical practitioner to his patients is so confidential and so close that no one cares to admit to such a relation in his home a man whose ethical ideals are low, whose habits of life are undesirable and whose moral character is in question.

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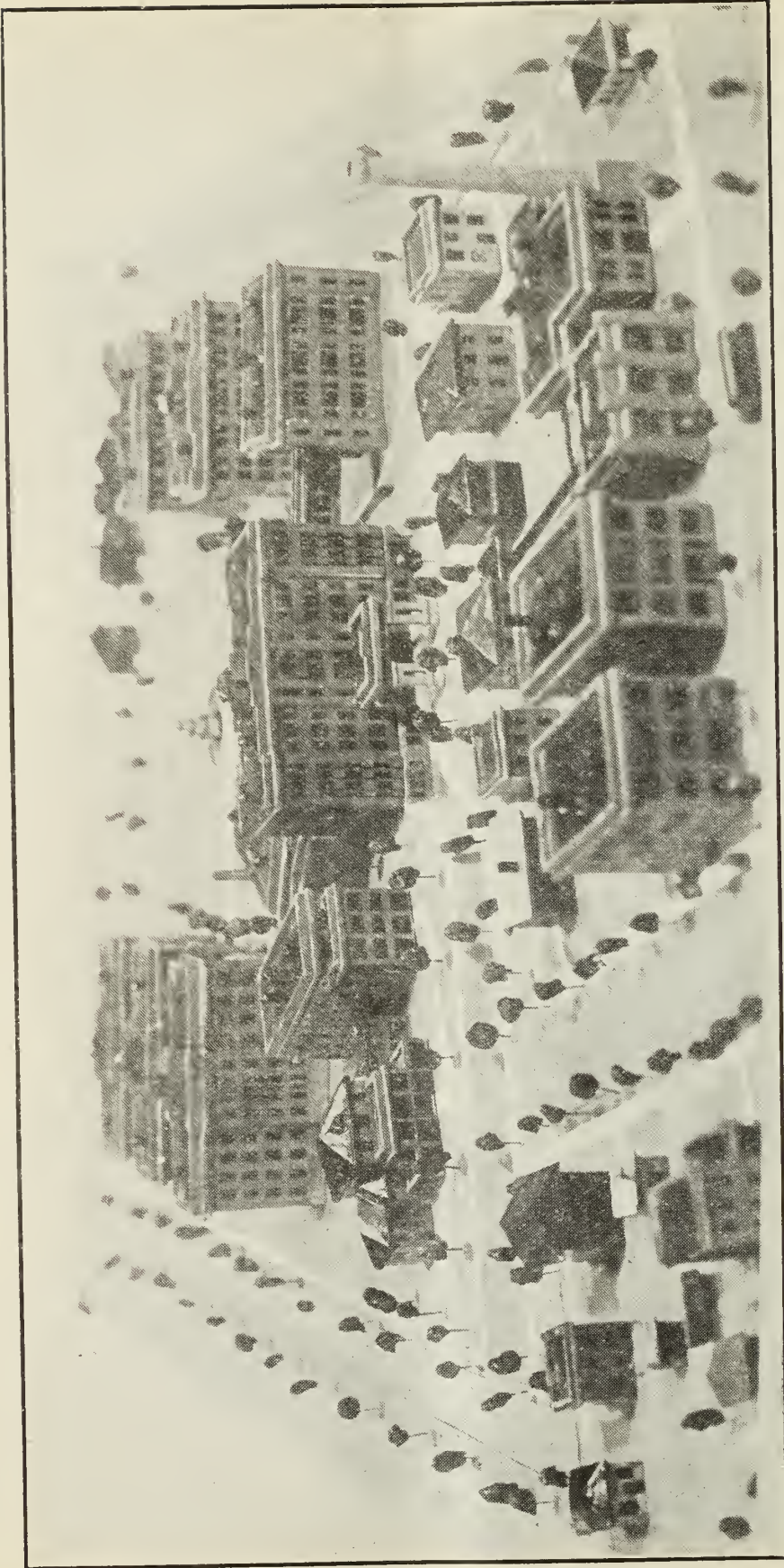
### **Plans for the Future Development of Buildings and Equipment of the School of Medicine, University of Kansas.**

MERVIN T. SUDLER, Ph.D., M.D.,

Associate Dean.

An examination of the various state institutions shows that those who had charge of their inception had no idea of their growth, and apparently built as though the state would have need to use them for only a few years. Every state institution has suffered from a lack of a comprehensive plan at the beginning. Having this in mind, a thorough study was undertaken of the grounds and the site





DEVELOPMENT PLAN OF THE UNIVERSITY OF KANSAS SCHOOL OF MEDICINE AT ROSEDALE. PHOTOGRAPH OF MODEL PREPARED IN THE STATE ARCHITECT'S OFFICE  
FROM PLANS FORMULATED BY THE STATE ARCHITECT AND ASSOCIATE DEAN, SUDLER.



given for the medical school at Rosedale. The original site was rough and presented serious problems relative to its topography and drainage.

The first two buildings were erected without regard to future developments or even the various functions of different departments of the work of the medical school. It was determined to study the site and make comprehensive plans for the future development of the school of medicine with its dispensaries, hospitals, and laboratories in 1912, but the work was not actively begun until 1914. The first step in this direction was a careful topographical survey showing various levels and suitable sites for building. The next step was to plan a space providing for growth of facilities of the types of work carried on in this institution. These fall under three general headings: the out-patient department, the hospitals, the laboratories.

Therefore as soon as the situation was carefully canvassed, it was seen that the site originally given the University was entirely inadequate. The out-patient department should be directly on the carline, so that patients would not be compelled to climb the hill. That is, it should be placed on the Southwest Boulevard; and this being the lowest point and nearest the coal transportation, it should also be the point where a heating plant should be erected. The longest and best ventilated side of the plat which was originally given was reserved for future hospital growth and the shorter side reserved for laboratory growth.

With these general plans in mind, the legislature was asked to appropriate money and secure a site in accordance with these studies and which would lead eventually to the economical and proper administration of the work of the institution. However, this was refused and a canvass was then made of the various owners of this property and requests made for gifts. This resulted in quite a large amount of the ground which is unoccupied by buildings being donated to the school. How-

ever, naturally the most valuable was occupied by buildings; and so far the University has found no method of acquiring this property.

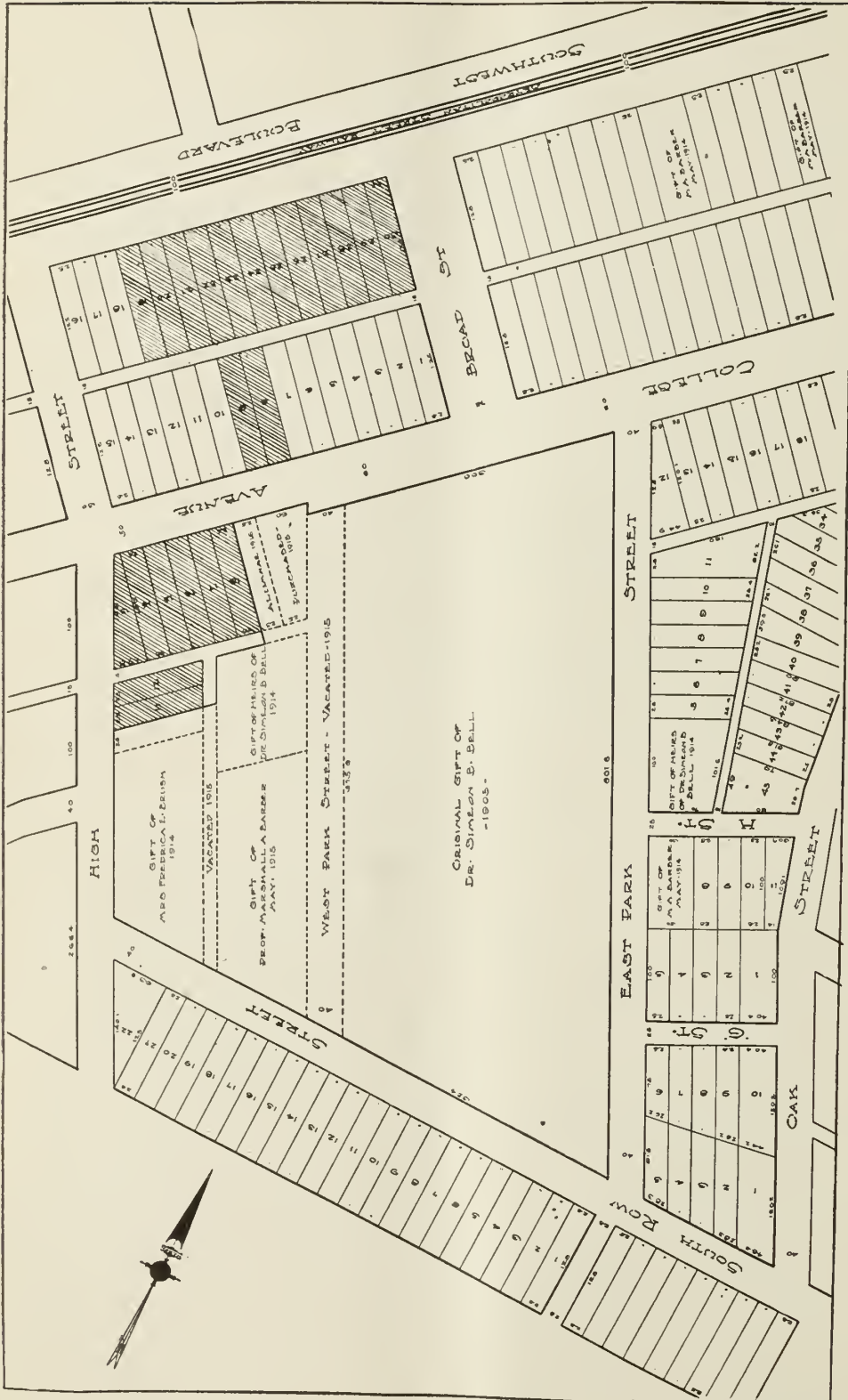
Following these studies, Mr. Charles F. Chandler, the State Architect, very kindly went over the situation, reviewed the suggestions and rough sketches which were presented to him, and proceeded to develop a plan looking ahead indefinitely, i. e.: This plan will provide for a large or a small school, large or small hospitals, etc. It is entirely elastic and its growth can take place automatically in accordance with the needs of the State. The photograph of the model shown is one which was carefully prepared by the State Architect's office. The prints show the general scheme of development of buildings which are now erected and the ones which are necessary in the near future, with the spaces reserved for growth. The other drawing shows the result of the efforts to secure the site necessary in order to carry out these plans.

By the adoption of this method, it will be very easy to spend any money which future legislatures may appropriate for buildings; making each part co-ordinate with the other so that eventually an institution erected for a definite purpose will have resulted.

Logically the next step should be the acquisition of the remainder of the site by the state. Then a suitable heating and power plant should be erected, properly located so that the smoke from the soft coal would not continually soil paint and linen of the hospital and laboratories.

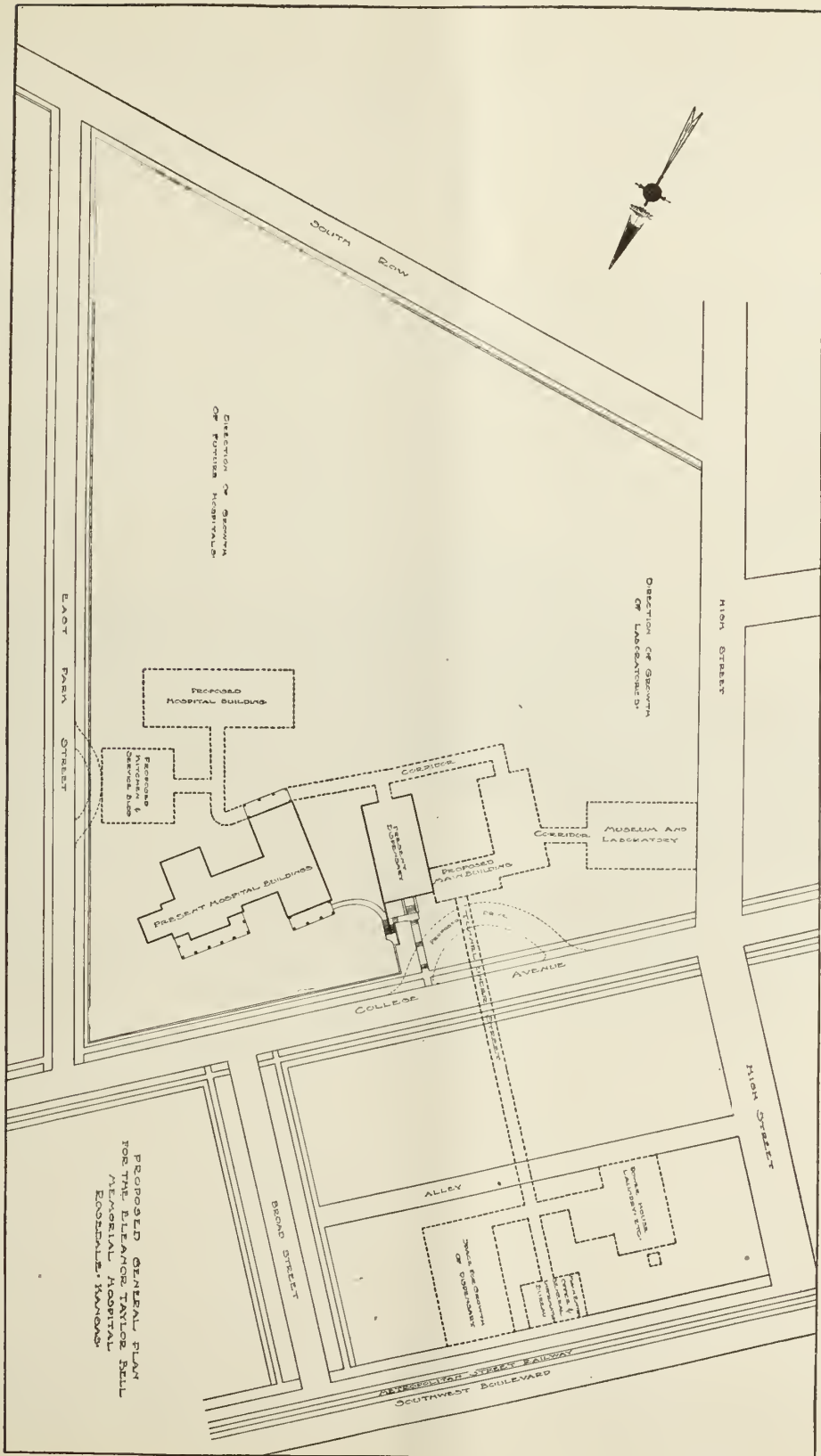
These preliminary steps will not increase the number of patients that can be cared for, but they would prove to be economical measures for the future.

The hospital is also lacking in suitable accommodations for certain classes of patients—children are kept in corridors, obstetrical cases in the female ward with other cases. All of the buildings shown in dotted outline are urgently needed at present. In addition a building to house the medical sciences at Lawrence is needed



UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, ROSEDALE, KANSAS.

THIS PLAN SHOWS THE ORIGINAL GIFT OF LAND FOR THE LOCATION OF THE SCHOOL OF MEDICINE AND HOSPITAL BY DR. SIMON B. BELL. OTHER GIFTS ARE INDICATED. THE SHADED PORTIONS SHOW THE GROUND NOT OWNED BY THE UNIVERSITY BUT NECESSARY TO ACQUIRE IN ORDER TO CARRY OUT THE PLANS



THE PROPOSED GENERAL PLAN FOR THE DEVELOPMENT OF THE UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, AT ROSEDALE.



--that the medical school shall be centralized, as are the law and engineering, and not scattered through various buildings.

It has long been understood that the funds derived from the estate of Governor Robinson (himself a physician) in accordance with his expressed wishes, would be used for this purpose. So far this has not

been accomplished.

These, in concrete, are the immediate needs of the school, but these plans have been made with "a long look ahead" and are elastic not only as to future needs but in regard to radical development or changes, should they arise, in medical work of this character.



BUILDINGS NOW COMPLETED AT ROSEDALE. THE BUILDING AT THE RIGHT IS THE NEW DISPENSARY BUILDING JUST COMPLETED. THE HOSPITAL IS THE CENTRAL BUILDING. THE NURSES' HOME IS THE BUILDING AT THE LEFT. UNIVERSITY OF KANSAS SCHOOL OF MEDICINE.

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### The Small College and the Medical School.

JOHN SUNDWALL, Ph.D., M.D.,

Professor of Anatomy, University of Kansas.

The small college was the original expression of the American spirit in the realm of higher education. Founded as they were in the majority of instances before the state universities, great credit is due them for our present educational attainments. The organization of the mid-

dle west into states, the formulation of the various state constitutions with provisions therein for just laws, sound educational institutions, in fact many things that man has found necessary in his pursuit of happiness, are in a large measure the wholesome fruits of seeds that were sown and nourished in the small colleges. All honor is due the small college for its invaluable contribution to American democracy and American ideals. Long live the small college.

The indispensable role that the small college has played in the development of the United States should, it would seem, insure its permanency. However, the present trend of higher education in this country is deleteriously affecting the small college, and it is forced to view these changes with much apprehension.

The development of the public high schools, the rise of the state universities and the growth of the university idea, the formation and growth of the migratory habit among students from one university to another, the tendency towards specialization even in the junior and senior years and the almost prohibitive cost (for the small college) of professional education—all are deeply affecting the small college. Attendance is decreasing. Students go elsewhere. Only those colleges which will recognize and readily adapt themselves to the new order of things will survive and flourish.

In Kansas, as elsewhere, numerous small colleges—denominational or otherwise—are scattered over the state—some at some distance from the medical school. The complaint has been made by some of these institutions that the medical schools take the student away from the college at the end of his sophomore or junior year. Accordingly, the small colleges are depleted, and criticisms are directed toward medical and other professional schools because of this drain. Facts, however, show that the small college is benefited far more than injured. For it is the medical requirement that students must have for admission at least two years of preliminary college work that compels many to matriculate in the small college who otherwise would not have done so.

Contravention on the part of the small colleges to this plan of combined courses is one of the great factors responsible for their present condition—and all know of the heroic struggles many of these institutions are making for existence. The particular factor to which I refer is the necessary loss of alumni. The value to an institution of an active alumni is uni-

versally appreciated, and there is no reason why those who go away from the college at the end of the second or third year should not be made alumni after having completed the medical laboratory sciences in some good medical school. Generally it is that institution in which a student is registered for the senior year which confers the bachelor's degree and thus includes him as an alumnus. Why should not the colleges manifest as much desire to include in their alumni desirable students who have satisfactorily completed in them the work of the freshman and sophomore years and elsewhere the equivalent of the work of the last two years, as those who have matriculated for only the senior year?

A much sounder attitude for the small college to assume is to recognize this forceful trend in modern education. It should be especially keen to affiliate with some strong medical school and to confer its bachelor's degree after the medical laboratory sciences have been completed. Numerous small colleges may have this relation with one strong medical school.

The college should carefully investigate the character of the various medical laboratory sciences for which college credit is sought. If necessary a committee from the college should be appointed to investigate the aims and methods of teaching these sciences. The college has the right to insist that the work be conducted along scientific lines and that it be the equivalent of advanced college work. Teachers of the medical laboratory sciences would welcome such inspection and would gladly explain their methods of instruction. The college will not object, I am sure, to certain auxiliary lectures and demonstrations that may accompany these various sciences for the purpose of calling the students' attention to their practical phases. The assurance the colleges desires is that these courses are taught primarily as sciences and are the equivalent of work required for their degree.

Medical schools, on the other hand, should recognize and encourage adequate college work bearing directly upon any of



the medical laboratory sciences. Frequently students enter medical schools already considerably advanced in such sciences as histology, embryology, bacteriology, etc. Due credit should be allowed for work equivalent to that in its own courses and the student should be permitted to do advanced work along these lines instead of repeating the course. The educational value of well conducted original work on the part of a student is much greater than that of regular class instruction.

The small college should familiarize itself with the requirements for entrance to the school of medicine and by close co-operation with it arrange curricula which would lead to the degree of A.B. or S.B. The School of Medicine and the College of Liberal Arts and Sciences of the University of Kansas, as well as at other universities, have combined curricula leading to these degrees.

The School of Medicine would be glad indeed to co-operate with the colleges of the state in this matter.



SURGICAL WARD IN THE BELL MEMORIAL HOSPITAL. THE CAPACITY OF THIS HOSPITAL IS SIXTY-FIVE BEDS.

### **The Work at Rosedale.**

**RALPH H. MAJOR, M.D.,**

Professor of Pathology, University of Kansas, School of Medicine.

During the past few years the number of physicians coming to visit the State Medical School has been constantly increasing. This is a source of great satis-

faction to the school which is anxious to have it known how much the school is trying to do directly for the profession and the training of medical students for the state.

Only last week a physician from the western part of the state made a two weeks stay at Rosedale. Just before leav-



ing he expressed his satisfaction at what he had seen and learned during his visit, remarking that he had come largely out of curiosity—just to see what was going on. He also emphasized that the great majority of the profession throughout the state were not aware of the work being done at Rosedale. "Tell them about it," he urged. "The doctors in Kansas do not realize what a good insitution you have here, how you give them opportunities to

them."

This brief sketch is intended to give an idea of what the student does at Rosedale after his preliminary year and a half at Lawrence, the scope and method of instruction, the work done in the fundamental laboratory branches, the clinical opportunities and the facilities for bedside instruction.

#### PATHOLOGY.

The major portion of the student's time



DRUG ROOM IN THE NEW DISPENSARY BUILDING.

come here and brush up and how they have expert advice just for the asking. Also they would be interested to know how you are training the medical students who will go out into the state and take up our work in the future. Why, I only learned yesterday that any physician in the state can send a patient bitten by a mad dog to Rosedale and receive the Pasteur treatment free of charge. The profession of the state want to co-operate with you and you want to co-operate with

the second half of the sophomore year is spent in pathology and clinical pathology. For this purpose the laboratory building erected in 1906 is utilized. This building is very well adapted to the purpose, the laboratories are well lighted, equipped with all modern apparatus and abundantly supplied with material for teaching.

In pathology the students received microscopic slides of all the important disease conditions, about 250 in number, which are carefully studied and which remain

the property of the student, an invaluable reference set for future use. This work is supplemented by the study of gross pathological tissues at autopsy or from the operating table.

In the sophomore year especial emphasis is laid upon the microscopic study. During the junior year the study of gross tissue is taken up more in detail. The student is shown first the gross specimen and later the microscopic slide made from this specimen. These exercises take place twice a week and there is always abundant tissue on hand for demonstration.

In clinical pathology the sophomore studies the pathology of the urine, feces, sputum and blood. Here he learns to test urine for albumen, sugar and acetone, make microscopic urinary diagnosis, to make blood counts and differential blood smears. He also learns to carry out the Wassermann test and to recognize the ova of intestinal parasites in the stools.

During the sophomore year, the student also begins his study of physical diagnosis, taking up first the normal and then the pathological findings. For this purpose the dispensary is largely utilized.

#### NEW DISPENSARY BUILDING.

The dispensary building just completed, contains abundant facilities for the treatment of ambulatory patients and for student instruction. It is a two-story brick building with a basement, containing one large waiting room for patients, a lecture room for instruction, eleven rooms for examinations of out patients, a large laboratory for clinical pathology, a drug room and nurses' supply room for the stock of necessary bandages and surgical supplies.

The various rooms are used for the examination and treatment of patients. Medicine, surgery, orthopedic surgery and diseases of the eye are handled in the forenoon, while gynecology, obstetrics, nose and throat are studied in the afternoon. The attendance at present averages more than 1,000 visits per month and at the present rate of increase will soon exceed 1,500. The daily visits vary from 40 to 65. All of these patients are seen by the

students and each student averages two patients daily, upon which he takes the history and makes the preliminary examination. At present there are twenty physicians working and teaching in the dispensary, an average of three students to each two instructors.

All of the work in the dispensary is done under the careful supervision of the instructor and students are not permitted to sign prescriptions or carry out any treatment except with the knowledge of the instructor. Accurate records of all cases are made and subsequent courses of the disease followed.

During the senior year a great part of the student's work is done in the Bell Memorial Hospital and affiliated hospitals—St. Margaret's Hospital and the Mercy Hospital, although he still continues to serve in the dispensary twice a week.

#### THE HOSPITALS.

The Bell Hospital contains sixty-six beds, most of which are available for instruction. Here again the student takes the history of the patient, follows the course of the disease and the treatment prescribed by the chief of the service to which the patient belongs. In medicine the bedside instruction is emphasized and clinics are held upon the most interesting cases. In surgery a similar method is followed and the student must be present at the operation and often serves as an assistant. In gynecology one of the interesting features of the course are the weekly conferences during which the preliminary diagnosis, findings at operation and the report of the pathologist are all discussed. In obstetrics both hospital cases and cases on the outside service are seen by the student. A minimum of ten cases must be seen and delivered under the supervision of the instructors.

At St. Margaret's and Mercy Hospitals the method of instruction is similar. Here the University of Kansas has abundant facilities in medicine, surgery and pediatrics.

As the ratio between the number of patients seen and studied and the number





THE LOBBY IN THE NEW DISPENSARY BUILDING OF THE UNIVERSITY OF KANSAS SCHOOL OF MEDICINE AT ROSEDALE. THE BUILDING CONTAINS ONE LARGE WAITING ROOM, A LECTURE ROOM, ELEVEN ROOMS FOR EXAMINATION, A LARGE LABORATORY ROOM, DRUG ROOM AND SUPPLY ROOM.

of students is commonly used by the medical schools as an index to the amount of practical training they are getting, it is interesting to know that this ratio is about eight patients at the University of Kansas to every student. This is considerably larger than in most of the well known medical schools.

#### LIBRARY FACILITIES OPEN TO THE MEDICAL PROFESSION.

Of great importance to the student of medicine is the possession or use of a large well stocked library. In this respect the medical student at Rosedale is especially fortunate in having a large reference library at his disposal. Valuable as is pure clinical instruction, its value is greatly increased when the student has the opportunity to read up on the cases he has seen in the dispensary and hospital and cor-  
rel-

late his own fresh experiences with those recorded in the literature.

The medical library at Rosedale is an integral part of the University library and contains more than 3,500 reference volumes. In addition, the library receives some 230 medical journals regularly. The subscription list of journals compares very favorably with that of other well known medical schools. A great many of the best American and Canadian journals are sent as complimentary copies to the library. Eighty-nine journals are subscribed for, of which 31 are American, 38 German, 14 English, 7 French and one Italian. Journals are received from Australia, India, Scotland, Ireland, England, Germany, France, Canada, Italy, Argentina, Columbia, Cuba and Mexico.

Any physician in the state has access to this library. He may secure any book



which is not assigned as definite reference reading and keep it two weeks by paying only the express charges. Also through the Rosedale library he may secure any book from the Surgeon-General's library in Washington—the largest and most complete medical library in the world.

#### ADVANTAGES OF THE SCHOOL TO STUDENTS.

The personal contact between the student and instructor is rightly emphasized as an important factor in determining a student's choice of medical school. Medical instruction no longer consists in lecturing to a large class. With the ever increasing importance of the medical sciences more detailed instruction to each individual student is absolutely necessary. This means that either the number of medical students must be greatly decreased or the number of instructors enormously increased. The decrease in the number of medical schools has been one of the startling developments in medical education the past ten years. Fortunately for medical education this has been accompanied also by an increase in salaried instructors.

Judging from the ratio of instructors per student as a fair basis of estimating the degree of personal contact, the school of medicine of the University of Kansas offers great inducements to the Kansas medical student. The ratio of instructors to students here is about one instructor per one and one-half students, almost one instructor for every student.

The medical school hopes in time to have a sufficient number of beds to do all its own teaching in its own hospital. All of the experience of the past and the opinions of the leading medical educators in this country supports this plan. The old objection to the students in the hospital wards is rapidly vanishing. The patient soon sees that the course of the disease is more closely followed when a student is assigned to make the detailed laboratory and clinical tests, which the busy consultant has not time to do. We very rarely have any difficulties on this score and the number of patients occupying private

rooms who make no objection to being used for demonstration is surprising to those who have not so often witnessed it.

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#### What Is Medical Education?

S. A. MATTHEWS, M.D.,

Professor of Physiology, School of Medicine.

Medicine is pre-eminently a science of protection and thus conserves one of the first laws of animate matter. How the differentiation of matter into living and lifeless was or is being brought about is still an unanswered question. At the present day, physiological chemists think of the question only in terms, that living originated from lifeless, and that the process is continuous. In the lifeless world chemical reactions, with the formation of various new compounds, are continually taking place, the result of the energy derived from the light and heat of the sun. We must take it for granted that living matter is the result of chemical reactions, and which when once formed, its existence depends upon chemical reactions. Ordinarily chemical reactions take place slowly, but under certain conditions, and in the presence of certain non-reactive substances they may take place with great rapidity. Such substances are called activators, catalyzers, enzymes, etc., in the presence of which substances which ordinarily react upon each other very slowly, may be made to react very rapidly.

Chemical reactions are continually taking place between living matter and certain of the constituents of its environments resulting in the formation of living matter like to that initiating the reaction. Living matter and certain of the constituents of its environment (pabulum), which are capable of entering into the formation of living matter may be non-reactive, but in the presence of a third substance may become reactive, or some substance first must act upon the pabulum fragmenting it so that perchance certain of the fragments may react with living matter. The mere contact of living matter with pabulum, though the pab-



DISSECTING ROOM AT LAWRENCE. FORTY-FIVE STUDENTS ARE NOW ENROLLED IN ANATOMY.  
UNIVERSITY OF KANSAS SCHOOL OF MEDICINE.

ulum may be non-reactive, causes the development in the living matter the power to form substances which may either activate the reaction, or so change (digest) the pabulum, that it can readily pass over into the living form. The formation of these substances (enzymes) is probably continuous, and the nature of the enzyme is determined more or less by the nature of the pabulum to be acted upon.

The development of these maintenance reactions are analogous to the development of another set of reactions called by Abderhalden protective reactions, also chemical in character.

Living matter not only meets with pabulum in its environments, but with other substances not in harmony with its constitution, which for life to maintain itself in nature, must be rendered harmless. The presence of these poisonous substances stimulate the formation of enzymes by living matter, for their destruction, the par-

ticular enzymes often being determined by the nature of the poison to be destroyed. Out of some such a conception as this, has developed all our present knowledge of how life protects itself; in short our knowledge of immunity reactions, and how to extend their influence so as to more completely protect life. These suggestions are sufficient reason for the statement that medicine is the science of protection.

To establish a higher immunity in man against the attacks of his enemies, and to bring about the destruction of his enemies so that he may live long upon the earth without fear, is the dream of the physicians. To be of the highest service in this capacity, he that would aspire to the office of the physician, "should give his heart to seek and search out, by wisdom, all things that are done upon the earth."

While all the branches of science are more or less held to pay tribute to medi-



cine, the one great science from which medicine must drink more freely than from any other is *biology*. To know medicine in all its fullness is to know life. To search out to know this, the greater of all phenomena, one must approach it through what might be termed the inorganic sciences, viz., physics and chemistry.

With the knowledge gained from these sciences one may with some propriety approach the fields in biology. Biology deals with life in a general way—i. e., it has for its field, the investigation of all forms of living organisms. With a knowledge gained from a general survey, one may then with profit enter upon more specialized fields and make one form of organisms the subject for study. This is where medicine begins.

The most primitive form of living organism is particulate. To answer the question: for what purpose is this or that and how does it work to fulfill its purpose, one first begins to examine into the structure of the organism in question, which, to the medical students, means anatomy. Anatomy as a living study includes more than the mere determination of the structure of the body in the abstract, but has for its purpose the determination of its functions (physiology) and in the earlier medical curricula was taught as such. But medicine, from the beginning for a more exact knowledge of the functions of the different members of the body, so certain investigators began to put emphasis upon function—how and for what purpose does the body react with its environment. Such investigations demanded a knowledge of the structure of the body as a pre-requisite. So physiology as a separate division of medical biology, evolved from anatomy, and like most organs, phylogenetically developed, has assumed a more important place in medical curricula than its immediate ancestor—*anatomy*—but nevertheless is wholly dependent upon anatomy. (Let no member of the body say: "I am of more importance than thou.")

A study of each and every part of the body, and the reciprocal relations of the work required of each member so that the body may act as a co-ordinated whole, and of the response of the body to its environment from which can come its only stimuli, constitutes the science of physiology. Anatomy is its hand-maid, and as for pathology and pharmacology, to them it is as the heat and light of the sun—the source of all energy.

Among the various divisions of biology as related to medicine, pathology stands at the top, and demands for pre-requisites a knowledge of biology, (general) anatomy, and physiology. The pathologist has for his field, the investigation of structural changes in tissue caused by deleterious influences (pathological anatomy); the investigation of the functions of the body as a whole and of the various organs of the body when injured (pathological physiology); and also all deviations from the normal chemical reactions of the body when injured (pathological biochemistry).

All that is stated above does not include the whole field of pathology, but the determination of the source and nature of harmful influences is one of its chief ends. Many living organisms live upon living organisms. Infectious diseases are the result of parasitic subsistence. The source of all infectious diseases must be looked for in some other form of living organism. So, the pathologist is required to extend his field of observation far away from the organism affected, to all other forms of organisms capable of parasitic existence, or that harbor parasitic organisms. (Remember Laveran's great contribution to pathology.) This requires of the pathologist the widest possible knowledge of general biology.

Space is limited and sometimes words only darken knowledge. The above simply is an expression of the line of thought indulged in by some of us and that when put into concrete form constitutes our conception of the sources of medical knowledge, which will best prepare the physician for the services that the public has the



right to expect from him, i. e., protection.

Our vision makes prominent the so-called fundamental scientific studies in contradistinction to the so-called clinical or practical studies. This is not right. Information obtained by clinical methods is just as scientific as knowledge gotten by means of a mercury manometer. However clinical teaching, considered as the practical application of medical knowledge, unless based upon an understanding of the fundamental sciences, is worse than vanity. Because clinical methods developed before the more exact scientific methods of investigation, the clinician was often one not versed at all in the scientific methods, and because of this deficiency in his education, science was more or less foolishness to him. This, and also that his so-called knowledge could be sold for a price, made his teaching as well as his influence only a "dead fly in the ointment pot of medical education". But to make such an accusation general would be to accuse many falsely. Old things are passing away, and all creation gradually is becoming new. Today the more advanced and practical medical schools are requiring of their clinical teachers and investigators a knowledge of the fundamental branches thus placing the clinician at the top of the list in breadth of information, and further because he stands next to disease, in hand to hand combat, he almost inadvertantly becomes the suggestor or finder of problems asking for solution.

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### **The Relations of the Medical School to the Profession of the State.**

MERVIN T. SUDLER, Ph.D., M.D.,

Associate Dean, School of Medicine, University of Kansas.

The ideal relationship of a medical school of the State University to the profession would be the mutual co-ordination and combination of their forces for the benefit of the sick and the prevention of disease in the state, either by direct service or the indirect help of an educational character.

The function of a modern medical school is no longer confined to the mere routine of teaching and graduating medical practitioners. That is doubtless the most important of its several activities, but it has ceased to be the only one. In the past half century, medical knowledge has increased by leaps and bounds; a new conception of medicine (based on the new sciences of bacteriology, cellular pathology and physiology) has arisen and made the practice of medicine infinitely more precise and its results more certain. Through preventive medicine, this development has given health and life to untold thousands who are unconscious of its benefits, and therefore ungrateful toward its development. Small pox, malaria fever, yellow fever, bubonic plague, typhoid fever, and tuberculosis are largely under control and could be entirely so if the knowledge of these conditions were properly applied. Such diseases as meningitis, diphtheria, infantile paralysis, and syphilis will probably be controlled during the next few years.

This increase in medical knowledge has made it necessary to recast medical education. The practice of preventive medicine (now recognized as the legitimate function of the city, county, state and national governments), and of curative medicine demand longer training, greater skill, and increased cost. Centers for the distribution of this knowledge and laboratories for its proper practice are necessary; especially in as much as the number of medical practitioners is decreasing.

Medical literature is so extensive that individuals cannot afford comprehensive libraries; and one of the most efficient means of assisting the profession of the state is through the library of the medical school. A physician wishing information in regard to a subject sends his request to the librarian; and by paying the transportation on them has the use of books and periodicals bearing on the subject for a term of two weeks.

While the School for Health Officers is the only scheduled post-graduate course,

the laboratories and wards are open to any competent physician to do investigation or special research; and several men have availed themselves of this privilege.

Microscopical examinations, essential for the diagnosis of many diseases and requiring special apparatus too expensive for each physician to own for occasional use, are made when possible by the profession at the school.

The merchant is not expected to provide clothing or food for the poor of his town, the lawyer advice, nor the landlords houses; but the medical profession is expected to give freely of its services to all who come, regardless of payment. This is manifestly unjust; particularly since modern medicine means so great an outlay on the part of the physician of capital and time. The rich can always command the services of the best apparatus and of those most expert in its use; but the poor and those of moderate means (who comprise 91 per cent of the population) cannot do so. The medical school, through its hospital, offers its aid to the practitioners of the state in cases of the latter type. This has been a hard matter to adjust equitably owing to the source of the funds

used to maintain the hospital and the lack of understanding on the part of the general population. In the beginning persons well able to pay for professional care have applied for treatment and have been admitted to the hospital. The deserving poor are not always received since counties have refused to assume the expenses of the patient. However, an effort has been made to give the greatest service and at the same time see that those in practice are treated with fairness.\*

The investigation of epidemics is not the work of the practicing physician and there is no provision made for his compensation, hence this work falls on the medical school through its relation to the State Board of Health.

In doing these various types of work, it is recognized of course that the medical school receives many cases of interest; and also, that the advice of the profession makes the school more efficient in its service.

The hospital work has been handicapped by the lack of hospital buildings and equipment. The medical school should have a hospital of at least 200 beds supported directly by the state as are the asylums

\*The following regulations are now in force and are giving satisfaction:

#### ADMISSION OF PATIENTS.

COUNTY PATIENTS are admitted under the provisions of chapters 292, 293 and 294 of the Laws of Kansas, 1911. The county assumes the expenses.

Chapter 292 provides that the "child of any indigent poor person of the state of Kansas, which child shall be afflicted with any deformity or malady that may be cured by surgical operation or by hospital treatment," may be received by the hospital upon the recommendation of the county board of health.

Chapter 293 provides that any indigent poor person, resident of the state of Kansas, may be received by the hospital for treatment or surgical operation upon the recommendation of the county board of health, if, in their judgment or the judgment of any reputable physician, the case is curable, or that such hospital treatment would be of benefit to the patient.

Chapter 294 provides that obstetrical patients that are public charges may be received by the hospital upon contract with the county board of health.

Applications for admission under these laws must be made on blank forms provided for that purpose.

FREE PATIENTS. The University maintains, out of the funds appropriated by the legislature, a few free beds for cases of special interest. Each case is acted upon separately by the head of the department having charge of the case, and a card of admission given.

CLINICAL PAY PATIENTS. Patients who can afford

to pay hospital expenses only will be received upon the presentation of the following statement from the attending physician:

"I hereby certify that I am a physician in regular attendance upon..... of .....; and that he (or she) is able to pay the hospital expenses but not professional fees. I therefore recommend him (or her) as worthy to receive such care from the staff of the hospital free. (Signed).....M.D."

The directory published by the American Medical Association is used as the standard in determining the validity of the standing of the signers of this form. The minimum cost to such patient is \$10 a week, and \$5 additional if the case is surgical. The patient is to pay the cost of transportation in every case.

PRIVATE PATIENTS. Patients who enter without cards of admission as described above are charged for hospital charges and professional fees.

#### INFORMATION.

Blanks and full information will be gladly furnished whenever requested. Since persons have frequently presented themselves for treatment without proper arrangements or credentials, all prospective patients are urged to read this carefully, or if still in doubt to write. By so doing much inconvenience and misunderstanding may be avoided. Patients can not be received except by the methods described in this circular.

For blanks or information in regard to any part of the work, address

THE SUPERINTENDENT,  
THE BELL MEMORIAL HOSPITAL,  
Rosedale, Kansas.



# Semi-Centennial Meeting

**Topeka, May 3, 4 and 5**

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The Fiftieth Annual Session of the Kansas Medical Society will be held in the Elks' Club Rooms at Topeka on Wednesday, Thursday and Friday, May 3, 4 and 5.

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The program for Thursday will consist entirely of addresses by Medical men of national reputation.

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A public meeting will be held on Thursday evening.

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Entertainment will be provided by the Shawnee County Medical Society for such time as is not otherwise occupied.

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Look over the program, which follows, and arrange your plans to attend this meeting.

# **Program of the Fiftieth Annual Meeting of the Kansas Medical Society**

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**TOPEKA, KANSAS, MAY 3, 4 AND 5, 1916**

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**WEDNESDAY, MAY THIRD**

**9 A. M.**

Meeting of the House of Delegates.

Report of Officers.

**11:00 A. M.**

President's Address—Dr. O. D. Walker, Salina.

"Who Shall Practice Medicine?"—Dr. W. H. Young, Fredonia.

"Elbow Injuries and Their Complications"—Dr. J. D. Riddell, Salina.

"Recognition and Treatment of Frontal Sinus Headache"—Dr. H. B. Caffey, Pittsburg.

"Acute Torsion of the Spermatic Cord, Symptoms of Which Resemble Strangulated Omental Hernia"—Dr. H. L. Snyder, Winfield.

"Cancer with Post Operative Treatment"—Dr. L. D. Johnson, Chanute.

"Carcinoma of the Larynx, with Report of a Case Operated"—Dr. P. H. Owens, Great Bend.

"Malignant Diseases of the Ovaries, with Report of Some Cases"—Dr. R. S. Haury, Newton.

"Fractures"—Dr. R. C. Lowman, Kansas City.

"The Indications and Modern Methods for Blood Transfusions"—Dr. E. S. Edgerton, Wichita.



"Prevention and Treatment of Some Eye Injuries"—Dr.  
R. S. Magee, Topeka.

"Serum and Serum Therapy"—Dr. S. P. Loomis, Lost  
Springs.

"Team Work"—Dr. J. T. Axtell, Newton.

"Stricture of the Esophagus, with Report of Case"—Dr.  
W. A. Wehe, Topeka.

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#### THURSDAY, MAY FOURTH

10:00 A. M.

"Methods and Results in Surgery of the Stomach and In-  
testines"—Dr. C. W. Crile, Cleveland, O.

2:00 P. M.

"Recent Advances" in Plastic Bone Surgery"—

Synopsis—Bone graft for Potts Disease, Bone graft  
peg for fracture of the neck of the femur, Inlay graft  
for shafts of the long bones, etc., illustrated by lan-  
tern.

Dr. Fred H. Albee, New York City

"Lantern Slide Review of Cystoscopic Methods in the Diag-  
nosis and Treatment of Ureteral Stone and Stricture"  
—Dr. Bransford Lewis, St. Louis.

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#### THURSDAY EVENING, MAY FOURTH

Open Meeting 7:00 P. M.

Address on Public Health topic. The public invited.

After Public Meeting, a Smoker will be given, to which all  
members are invited.

FRIDAY, MAY FIFTH

Meeting of the House of Delegates and Council.

Election of Officers.

10:00 A. M.

"Surgery of Nasal Deformities, Illustrated by Lantern Slides"—Dr. W. S. Sutton, Kansas City.

"Neurasthenia and the Rest Treatment"—Dr. L. L. Uhls, Overland Park.

"Advantage of Transverse Incision in Appendicitis"—Dr. J. D. Wilson, Emporia.

"Sexual Neurasthenia"—Dr. G. C. Mahaffy, Ottawa.

"Chemistry as the Essential in Medicine"—Dr. P. S. Mitchell, Iola.

"Human Actinomycosis"—Dr. M. T. Sudler, Rosedale.

"Chronic Intestinal Indigestion, Cause and Treatment"—Dr. F. C. Boggs, Waverley.

"A Foul Breath Causes Other than Dental Caries"—Dr. J. H. Johnson, Coffeyville.

Paper—Dr. Orr, Kansas University.

"The Process of Diagnosis"—Dr. T. A. Jones, Liberal.

"A Discussion of Some Unavoidable, or at least Excusable Errors of Diagnosis, and Plea for Earlier and More Frequent Exploratory Operations in Abdominal Lesions"—Dr. R. C. Dugan, Ottawa.

"Function of the Adrenal Glands"—Dr. J. S. Sutcliff, Iola.

"Pyorrhoea"—Dr. Ed McJuillen, Winfield.

"The Allen Treatment of Diabetes"—Dr. C. F. Menninger, Topeka.

"Uses and Abuses of Ileo sigmoid estomy"—Dr. H. L. Charles, Atchison.

"Pneumonia in Children"—Dr. F. W. White, Emporia.

Paper—Dr. C. W. Lawrence, Emporia.



and sanitariums and under proper supervision of health officers of the county receive all cases suited to its care. Where the health officers of the county understand the situation, the county laws in force work well. In some cases, however, the matter has been difficult. Counties have sent tedious difficult cases of diseased bone to the institution and assumed the expense of the care for two weeks. They have also sent without warning or notice a poor sufferer who could not be turned away without violating the laws of humanity, and when admitted, flatly told the hospital authorities that this was a state hospital and it would be compelled to stand the expense of the care. Even a state hospital must pay its bills; and a hospital which receives only about 30 per cent of its running expenses from the state is certainly not strictly a state hospital in the sense that it is supported largely or wholly by the state.

In conclusion it may be said that a full realization of the ideals mentioned in the beginning has been hindered by a misunderstanding on the part of the profession and by the consequent lack of support as to buildings, equipment and maintenance. It is the belief of those who are working most earnestly for the development of this most necessary portion of higher education and service of the State University that these causes will not long stand in the way; and that through the aid of the medical profession of the state, the school will be able to render better service, and that the practicing physician, through the school, will be able to give better care and attention to those of the sick who seek his help, and particularly for whom hospital care is essential.

—R—

#### **Needs of a Medical School.**

"Thoroughly equipped laboratories, in charge of men, thoroughly equipped as teachers and investigators, is the most pressing want today in the medical schools of this country."—Teacher and Student—Osler.

#### **Pre-Medical Entrance Requirements.**

PROFESSOR F. B. DAINS,

Chairman, Committee on Advanced Standing, School of Medicine, University of Kansas.

Few subjects have given rise in the last twenty years to so much discussion as the requirements for a medical education. Independent physicians, committees of the American Medical Association, and the universities have all contributed their quota in efforts to solve this question. The result is that the amount of work demanded by the candidate for a medical degree has been decidedly increased, not only in the introduction of new subjects and the expansion of others in the medical curriculum, but also in the way of requirements for entrance to the medical school. In the following article a brief discussion of this latter phase may not be out of place, because of its relation to the Kansas student who is seriously considering medicine as a profession.

The premedical training should strive toward two ends: first, a general education with its wide interests which will allow the physician to play his proper part in the social, economic, and intellectual life of the community; and second, a technical training that will enable him to make the most of the severe professional studies he must face for four years. Much variance of opinion has arisen regarding the amount of time that should be devoted to this premedical preparation. It is generally agreed that the ideal standard would require an A.B. degree with its four years of general work, but this in addition to the four years in the medical school and one year as interne in a hospital involves a greater expenditure of time or money than can be afforded by many. Consequently a compromise has been reached by many universities, including that of our own state, whereby two years (sixty term hours) of academic training above the high school are required for entrance to the medical school.

In addition experience has shown that certain fundamental subjects, mainly scientific, must be included in this premed-

ical work. These are necessary not only for the purpose of saving time in the medical course, but also to give the student a training in scientific methods of work and thought not obtained from literary subjects alone. These specific subjects include a modern language, physics, chemistry, and zoology, which thus become absolute requirements. If not included in the sixty hours of college work, the number of hours is thereby so much increased.

The value of such a premedical training is unquestionable but the history of the Medical Department of Johns Hopkins University affords a concrete example. That institution has an A.B. requirement for entrance, including the above specified subjects. The records of the graduates of its first ten classes show that "their success along orthodox lines has been unusually high". (Presidential Address at the Annual Meeting of the Association of American Medical Colleges, Chicago, February 8, 1916! reprinted in *Science*, March 17, 1916.)

Let us now take up more in detail the entrance requirements of the Medical School of the University of Kansas, since they also apply to most of the Class A schools. It may be said in passing that the records of the Secretary of the American Medical Association show that this school stands well among the foremost in its rigid adherence to these requirements.

#### SPECIFIC REQUIREMENTS.

*A. Modern Language.* Some catalogues require a "reading" knowledge of French or German. This is one of those indefinite statements that may mean much or little. The University of Kansas places the minimum at ten hours. This is little enough, but experience has shown that a student with this thorough foundation can learn to read the medical literature, if he so desires and will make the necessary effort. The order is usually put: German, French, though a reading knowledge of both is very desirable. The prospective medical student has this advantage, that part at least of the modern language requirement can be met in his high school

preparation. (His high school work, of course, includes some Latin.)

*B. Physics.* The requirement here is ten hours, but again the American Medical Association says that one-half of this can be taken in the high school, leaving a minimum of five hours college requirement. At the same time, considering its importance, ten hours of college work above the high school is none too much.

*C. Zoology.* Here again is the minimum requirement of ten hours of college work. This must include a course in comparative anatomy; the other hours can be satisfied with beginning courses in zoology or elementary botany, both giving the necessary foundation for the later work.

*D. Chemistry.* The ten hours of this subject taken in college must include general inorganic chemistry. It may or may not include a course in qualitative analysis. Some institutions require specifically this latter subject, and as a matter of fact it is extremely desirable that the preliminary chemical training should include this analytical work.

In addition to this, if time allows, some training in quantitative analysis, especially volumetric, would be very helpful for later chemical work. Volumetric methods form the basis of many chemical laboratory investigations that play such an important part in accurate diagnosis.

So far as the Medical School is concerned, the remainder of the sixty hours can be filled out with elective subjects. At the University of Kansas the subjects offered in the first two college years are divided into eight groups and the student, in order to insure a certain breadth in his training, is required to take at least five hours in six different groups.

The required subjects in the way of modern language, physical and biological science, will have satisfied three of these groups, and English, which is practically everywhere a requirement, a fourth group. This leaves only two unfilled. For the other two subjects no better choice can be made than courses in history and economics, and in logic or psychology; the



latter on account of its intimate relationship to many problems in medicine, while the history and economics are basic subjects preparing for good citizenship.

Wherever the premedical work is taken, the prospective medical student is advised to meet such group requirements as outlined above in spirit, if not in absolute detail. The progress of modern medicine is based upon work in pure science. Hence it is strongly urged that the college or institution chosen for this premedical training be one adequately provided both with laboratories and instructors so that this preliminary scientific work can be given in the best possible way.

The handicap of insufficient preparation will follow a student throughout his whole medical course. On the other hand do not neglect cultural subjects, which from a broad point of view are fully as important in their way as the scientific courses. If possible devote three or even four years to the purely collegiate work so that a wider range of both scientific and non-scientific studies can be taken. The physician must, of course, so far as possible, be a master of his subject; but in order to serve the community as he should, he must be a man of broad training and interest to whom "nothing of humanity is alien."

—R—

### Summer School for Physicians and Health Officers.

S. J. CRUMBINE, M.D.,

Secretary State Board of Health, Dean School of Medicine, University of Kansas.

The epoch making discoveries of Pasteur mark the beginning of real scientific medicine, particularly that branch of the science known as preventive medicine. Before this time preventive medicine was but little better than a blundering art, and public health work was confined almost entirely to maritime quarantine. The most grievous restrictions were placed upon trade with but little accomplished save the disturbance of commerce. With the discoveries of the causes of certain

communicable diseases came the birth of the new idea in public health work which might best be expressed in the one word, "prevention," and thus we note the remarkable advancement in that phase of public health work that has to do with the prevention of disease.

Now that it is becoming more generally understood that many diseases can be prevented, or their prevalence very much restricted, society is demanding that ways and means be instituted for minimizing sickness and death from preventable causes: Thus, boards of health have been created and physicians with special training in preventive medicine chosen as health officers.

Schools of medicine have been slow to establish courses for the special training of health officers, due probably to the lack of demand and the general attitude of conservatism toward adopting anything outside of the beaten path of precedent.

It must be to the credit of the University of Kansas that six years ago, in cooperation with the State Board of Health, there was offered the opportunity of special instruction in preventive medicine to the health officers and physicians of the state, to the end that the public health might be more intelligently and efficiently conserved during the present generation.

These courses have been given each succeeding year with growing interest and value, as attested by the increasing number who attend the course. Last year the course was lengthened by the addition of a week in which instruction and demonstrations in the fundamental sciences were given at Lawrence by the faculty of the School of Medicine. The second week is given at the clinical department of the school in Rosedale, and consists of clinics conducted at Bell Memorial Hospital by the attending staff, and public health lectures and demonstrations every afternoon by the most noted sanitarians that can be secured in the United States.

The sixth annual school will be given this year beginning Monday, April 17, at Lawrence for the week, and at Rosedale

for the week beginning Monday, April 24. Every licensed physician of the state is invited to attend. Course free!

The program and schedule of courses will be announced later.

—R—

### **Efficiency of Hospital Increased When Used for Teaching Purposes.**

"I speak after an experience of nearly forty years as a surgeon to a half dozen hospitals and can confidently say that I have never known a single patient injured or his chances of recovery lessened by such teaching.

"Moreover, trustees may overlook one important advantage of a teaching hospital. Which will be least slovenly and careless in his duties, he who prescribes in the solitude of the sick chamber and operates with two or three assistants only, or he whose every movement is watched by hundreds of eyes, alert to detect every false step, the omission of an important clinical laboratory investigation, the neglect of the careful examination of the back as well as of the front of the chest, the failure to detect any important sign or symptom? Who will be the most certain to keep up with the progress of medical science, he who works alone with no one to discover his ignorance; or he who is surrounded by a lot of bright young fellows who have read the last *Lancet* or the newest *Annals of Surgery*, and can trip him up if he is not abreast of the times? I always feel at the Jefferson Hospital as if I were on the run with a pack of lively dogs at my heels. I can not afford to have the youngsters familiar with operations, means of investigations or newer methods of treatment of which I am ignorant. I must perforce study, read, catalogue and remember, or give place to others who will. Students are the best whip and spur I know."—DR. KEEN, before Congress of American Physicians and Surgeons.

—R—

The United States Public Health Service has trapped 615,744 rodents in New Orleans in the past eighteen months.

### **Organization of a Hospital.**

"The most pressing need in the clinical departments of the medical schools of the United States, at present, is that of school controlled hospitals in which the students may actively participate in the work of diagnosis and treatment and, under skilled direction, be held responsible therefor. In the hospitals, the conditions should permit of an adequate organization for the three great functions of a university clinic—practice, teaching and research. These hospitals should be large enough to supply sufficient clinical material in internal medicine, surgery, obstetrics and in the principal specialties. The organization should insure a large degree of departmental autonomy while providing for proper correlation of the activities of all the clinics.

It is only here and there in the United States that one finds belonging to the medical school (1) a hospital of sufficient size, equipped with teaching and working quarters, with wards situated in immediate contact with commodious clinical laboratories, (2) an organization according to which the professors of the clinical departments of the medical faculty are also the principal physicians and surgeons on the hospital staff, the whole control of the individual departments being in the hands of the respective professors. Until medical faculties obtain by endowment or agreement facilities of this sort, the clinical sciences must remain backward in their development."—LEWELLYS F. BARKER, *Some Tendencies in Medical Education in the United States.*

—R—

Since the introduction of 606 in the treatment of syphilis reports of cases of reinfection are becoming numerous. Several cases of undoubted cure and reinfection have recently been reported. One case is reported in *Le Monde Medical* in which a reinfection occurred in a little more than a year after receiving the treatment for his first infection.

—R—

Measles kills over 11,000 American children annually.



# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - - Editor

ASSOCIATE EDITORS—C. W. REYNOLDS, C. C. GODDARD, HUGH B. CAFFEY, O. P. DAVIS, W. E. CURRIE, ARCH D. JONES, K. P. MASON, H. N. MOSES, C. S. KENNEY, D. R. STONER, J. A. DILLON, W. F. FEE.

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### Some Reasons.

Some years ago, when the Carnegie Foundation published a report of its study of medical education in this country and placed its estimate of the minimum annual budget required to support a well equipped medical school at \$50,000, there was an inclination to question the judgment of those who were responsible for that estimate. When the Council on Medical Education of the American Medical Association fixed a curriculum and established a standard equipment for acceptable medical colleges, it soon became evident that only those institutions that were heavily endowed, and such state universities as were receiving liberal appropriations, would be able to maintain medical departments. The elimination of the independent medical colleges and the medical departments of the smaller and poorly endowed universities—all the colleges which depended largely for their support upon the income from tuition—was simply a matter of time. The elimination has been quite thorough and fairly complete, and, although it was no doubt hastened by the published criticisms from the Carnegie Foundation, would have been no less complete without that interference. No school which failed to maintain the standard of

efficiency prescribed could hope to attract many students. To maintain such a standard demanded a very large increase in the annual expenditures. Some of the larger of the independent schools were able to continue for a time, but the increased requirements for admission to the study of medicine, the increase in the time and the work necessary to complete the curriculum, and the consequent increase in fees, soon diminished the number of students and reduced the income below the actual expenses.

In the plan for "reconstruction", as outlined by the Carnegie Foundation, it is estimated that to supply the annual need for doctors, on a basis of one for each fifteen hundred increase in population, and one-half the number of those who have died, will require an output of two thousand graduates each year. Of this number three hundred will be required for the middle west, comprising eight states, Minnesota, Iowa, Missouri, Oklahoma, Kansas, Nebraska, South Dakota, and North Dakota; and it is proposed that these graduates shall be furnished by the schools in St. Louis and by the medical departments of the universities of Minnesota, Iowa, Nebraska and Kansas. The total number of graduates in this country in 1915 was 3,536, or 1,536 more than the estimated requirement, and the number of graduates supplied by all the schools in the middle west was 295, or 5 less than the estimated requirement, but only 144 of these were furnished by those schools enumerated as the proper sources of supply for this territory. All of the schools in Missouri furnished 152 graduates, but St. Louis University Medical School and Washington University Medical School, the only A schools in Missouri giving a complete course, furnished only 72 of the number. Nebraska furnished 63 graduates, but only 12 of these were from the Nebraska University. The medical department of Oklahoma University furnished 20, but this is a B school. Iowa furnished 26, Minnesota 20, and Kansas 14, all from A schools. According to the figures Missouri fur-



nished more graduates than all the other states combined, and the Class A schools in St. Louis furnished as many graduates as all the other Class A schools in the middle west. Nebraska furnished more graduates than Minnesota, Iowa and Kansas combined, while Kansas, with clinical facilities greater than those of any other state in the middle west except Missouri, is lowest in the list.

Neither Minnesota, Iowa nor Kansas, is furnishing its proper proportion of medical education for the territory in which it belongs. Neither of them shows a proper activity in this direction, either in the number of graduates or the number of students enrolled. The total number of medical students enrolled in Kansas in 1915 was 101, in Iowa 154, in Minnesota 208, while in Nebraska the enrollment was 273, and in Missouri it was 623. The total number of students enrolled in all the medical schools of the eight states comprised in the middle west was 1,452.

Some further facts may be elicited from the figures here presented. In 1915 there was a total enrollment in this country of 14,891 medical students and a total graduation of 3,536 or 23.75 per cent of the enrollment. This is but slightly in excess of the per cent of graduates estimated by the Carnegie Foundation in its plan for "reconstruction". The total enrollment in all the medical schools in the states comprised in the middle west was 1,452 and the total number of graduates 295 or 20.38 per cent. The normal per cent of graduates would have yielded 345 or 45 more than the estimated requirement.

It may be noted as a fact for consideration that among the class A schools in this territory the Iowa University Medical School graduated 17 per cent of its enrollment, Kansas University Medical School 14 per cent, Nebraska University Medical School 12.5 per cent, Minnesota University Medical School 9.6 per cent. St. Louis University School of Medicine graduated 23 per cent of its enrollment, and Washington University Medical School 28.6 per cent. In the states enumerated

there were 887 medical students enrolled in the class A schools, including Missouri University which does not teach the clinical years, and there were 144 graduates or 16.2 per cent. There were 550 medical students enrolled in the class B and class C schools in these states and there were 151 graduates or 27.45 per cent.

It must not be too readily concluded that this difference is due entirely to a difference in requirements for graduation or to laxity in the enforcement of these requirements. In at least three of the schools of the lower grades, included in our list, the graduating per cent was below the normal, and it may be observed that Washington University graduated 38.6 per cent, University of Illinois 35 per cent, Harvard 27 per cent, Jefferson 26 per cent, Bellevue 25.5 per cent, and Johns Hopkins 24.6 per cent. These figures are quite significant of certain facts concerning the present status of medical education in this and other states, and one of them is that the low grade medical schools are slowly but surely "passing on". The high graduating per cent in these schools is due largely to the fact that credits from class B and class C schools are not accepted by class A schools, and students beginning their medical course in one of these must complete his education in that or one of the same class; and to the fact that the increasing difficulty with which graduates from the lower class schools are securing admission to hospitals, and admission to practice in many states, has greatly diminished the number of matriculates in these schools, so that the classes, instead of being progressively smaller from freshman to senior, are progressively larger and the graduating class is frequently the largest of all. On the other hand students of the class A schools find ready admission to the larger and better schools, or schools of wider reputation, and the medical departments of the universities of Minnesota, Iowa, Nebraska and Kansas, lose their students to Illinois, Washington, St. Louis, Harvard, Johns Hopkins and others. And those schools

have a large graduating per cent because of this influx of junior and senior students.

Why should the Kansas University Medical School lose any of its students to any other school? It has abundant facilities for instruction. It has a competent faculty, a hospital of its own, and an accessible population of nearly four hundred thousand from which to draw its clinical material. Why should the Medical Department of the University of Minnesota, which is located in a city whose population is nearly three hundred and fifty thousand, lose a larger per cent of its students to other schools? And why should the Medical Department of the University of Iowa, located in a city of a little more than ten thousand, lose a smaller per cent of its students than either Minnesota or Kansas? These desertions are not due to lack of facilities for instruction, nor to lack of thoroughness, nor can they be due to lack of clinical advantages. It is a matter of sentiment—or lack of sentiment. Neither the medical profession, nor the medical students of Kansas, have learned to properly appreciate the medical school. There has always been in Kansas a very strong sentiment for its state schools, so strong that no legislature has had the temerity to refuse them liberal support and generous appropriations. If the medical school does not share in the benefits of this sentiment it is because the medical profession has not shown its loyalty to the school which was created for its benefit. It is in the hope that a closer relation between the profession and the school may be brought about that the present number of the Journal is specially devoted to the medical school.

—R—

The Industrial Sickness Insurance Bill which is now before the legislature of New York, is apparently not in favor with the profession there. The Medical Society of the County of New York has expressed its disapproval of the bill.

—R—

Four per cent of the inhabitants of certain sections of the South have malaria.

## SOCIETY NOTES.

### WILSON COUNTY SOCIETY.

The Wilson County Medical Society met at Neodesha at the high school building at 7:30 Tuesday evening, March 14.

Reading of minutes and roll call. Applications of Dr. Statella Fairchild and Dr. A. W. Fairchild of Fall River were reported on favorably by the censors and they were elected to membership.

The program committee had designated ten physicians who were each to give a five-minute talk on something of interest.

Dr. Randall was first on program, reporting fractured skull. Man fell; showed very little external wound; no particularly alarming symptoms; comatose two hours after injury; died ten hours later. Evidently cerebral hemorrhage.

Dr. Allen demonstrated some fracture splints. Showed us some old timers and then some of Depuy's latest wire ones. Dr. Allen is a recognized expert in fracture cases, and gets good results from any old kind of a splint.

Dr. Moorhead reported some complicated fractures, showing X-ray pictures of several, one a fracture of the middle third of tibia; had been overlooked by a physician in Oklahoma and had been untreated for two weeks.

Dr. Somers related history of case of anthrax. Slight injury to base of finger nail; fever two days later, 105; signs of involvement of left lung; axillary and other glands enlarged, were incised; no pus, but bloody water. Patient died seventh day of illness.

Dr. Thomas spoke of case of osteomyelitis. Boy age five; history of slight injury to the foot; things went a rapid and stormy course, resulting in death.

Dr. Williams told of a broken jaw. Called in a dentist and, with his aid, perfect results in a difficult case.

Dr. Flack reported a case of cerebral hemorrhage coming on suddenly in young married woman, age 32; always had been in perfect health; family history negative. Unique, account age and previous history.



Doctor asks if it might have been an embolus, and answers, hardly.

Dr. Addington tells of multipara. Age 30; four months fetus at term; also of a placenta previa.

Dr. Gray told of two-year-old child being choked on a chicken bone and apparently getting all right, except slight hoarseness, and two weeks later coughed out a bone  $1\frac{1}{2}$  or 2 inches long; evidently had been there two weeks. Question, where was the bone?

Dr. Young tells of ruling of our attorney general, that osteopaths can practice medicine and register under the Harrison Anti-narcotic law in Kansas, and osteopaths are doing just that very thing. Selah.

After a short discussion of the above subjects, all adjourned to the banquet room. A three-course banquet was served by the high school students. After banquet, talks by a number of the members.

Drs. Duncan, Wiley, and Moorhead were appointed to draft a resolution about the uneducated practicing medicine, to be presented to the State Society.

Dr. Somers, who is getting along in years, thought that we should meet every sixty days instead of four times a year. Some doubt as to the advisability, but we decided to have our next two meetings sixty days apart.

A resolution was adopted, extending a standing invitation to all the dentists in the county to meet with us at all our meetings.

Dr. Wiley, in a few well chosen words, thanked the Neodesha physicians for the banquet and all around courteous treatment, in behalf of the visitors.

The program was a departure from the usual, and seemed to meet general approval.

Our County Society has a membership of twenty-two, there being four in the county who are not members—two of these four being ineligible.

Next meeting is at Altoona in May, which is a purely social affair.

E. C. DUNCAN, Secretary.

#### DECATUR-NORTON COUNTY SOCIETY.

The Decatur-Norton County Medical Society met in Norton, Kansas, on March 1. The program was: President's Address by H. O. Hardesty, and a paper on "Kansas and the Tuberculosis Problem" by C. S. Kenney. Clinics and Round Table.

#### MORRIS COUNTY SOCIETY.

The Morris County Medical Society met in Dr. Miller's office in Council Grove, April 3. The program consisted of a paper on "Simple Things in the Practice of Medicine" by Dr. C. A. Yearout of Dunlap and a paper on "Appendicitis" by Dr. B. E. Miller.

#### WYANDOTTE COUNTY SOCIETY.

At the regular meeting of the Wyandotte County Medical Society on March 7, Dr. Lowman made a report of some surgical cases and Dr. Barney read a paper on Procidencia.

At the regular meeting on March 21, Dr. Glasscock read a paper on "Treatment of Paresis" and Dr. Gray read a paper on "Tumors of the Thymus Gland."

#### FRANKLIN COUNTY SOCIETY.

The Franklin County Medical Society held its regular meeting on February 23. The president, Dr. J. P. Blunk, officiated. Dr. W. L. Jacobus, Ottawa, read a very interesting paper on "Epilepsy."

The following resolution was introduced by Dr. Haggart and was adopted by the Society:

"Be it resolved by the Franklin County Medical Society, that all dentists in Franklin County, who are members of the District, State or National Dental Association, are hereby elected to honorary membership in this society."

Dr. R. C. Dugan of Ottawa was elected delegate to the meeting of the State Society. The meeting was well attended.

C. E. BULKLEY, Sec'y-Treas.

The Eighteenth Annual Meeting of the American Proctologic Society will be held at Detroit, Mich., June 12 and 13, 1916.



## BOOKS.

### Social Travesties and What They Cost.

By D. T. Atkinson, M.D., Dallas, Texas. Published by Vail-Ballou Company, New York.

This is a very interesting little book dealing with the sex problem. The author has presented, in a very lucid manner, the "price we pay for ignorance". There is no doubt but ignorance is responsible for much, and the people seem to have accepted the fact, but no one has so far suggested a remedy which they are willing to adopt. The author advises the parents of children to instruct them in sex matters, which is good advice, but, as he suggests, advice which comparatively few parents have been willing or able to follow. He sees much to hope for in the ultimate effects of the various forms of restrictive legislation that the recent wave of public sentiment has popularized.

### Venereal Diseases.

A Manual for Students and Practitioners. By James R. Hayden, M.D., F.A.C.S., Professor of Urology at the College of Physicians and Surgeons, Columbia University, New York; Visiting Genito-Urinary Surgeon to Bellevue Hospital; Consulting Genito-Urinary Surgeon to St. Joseph's Hospital, Yonkers, New York. 12 mo., 365 pages, with 133 illustrations. Cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

This, the fourth edition, has been thoroughly revised and much new material added to the text. The subjects are well illustrated. The majority of the illustrations are original and many of them are from the author's own cases. He has carefully carried out his plan to emphasize the practical, clinical aspects of the subjects he discusses and has included only such methods of diagnosis and treatment as his personal experience has proved to be useful and efficient. It is concise but fairly complete.

### Sexual Impotence.

New (5th) Edition. Enlarged. By Victor G. Veeki, M.D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth edition, enlarged. 12 mo. of 405 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$2.25 net.

On reading this book one is impressed with the largeness of the subject—a subject upon which very little is usually said

or written. There are more facts to be considered in its correct analysis than the average man is willing to believe, until he has read the book. It is a subject which demands more careful attention than most practitioners have given it. The author has presented an exhaustive study of sexual impotence and we commend it most heartily to every man in the profession who is conscientious in his efforts to restore his afflicted patrons to health and happiness.

### Cancer of the Stomach.

A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases, by Frank Smithies, M.D., Gastro-enterologist to Augustana Hospital, Chicago. With a chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Ochsner, M.D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.50 net; half morocco, \$7.00 net.

In this book Dr. Smithies has contributed something of exceeding value to the profession. It must be studied to be fully appreciated. From the great amount of statistics which he has collected the author has deduced some very interesting facts in regard to the occurrence of cancer of the stomach. The author presents here the facts in regard to cancer of the stomach as determined from a study of 921 demonstrated cases. The cases are carefully classified and analyzed. The chapter on morbid anatomy, as well as the one on Roentgen examination, is profusely illustrated.

### Pellagra.

Second edition. By George M. Miles, M.D., Gastro-enterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital, Atlanta, Georgia. Octavo of 261 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$3.00 net.

A book written on the subject of Pellagra any number of years ago must need revision now and even the most recent will probably need further revision, for, as the author of this book says, "while the causation of pellagra is not yet entirely proved, the conviction is expressed that we are much nearer the goal of etiologic certainty, pathologic assurance, and consequent therapeutic confidence." There is

sufficient known on the subject now to justify its compilation into book form. The author has brought his second edition up to date and includes the result of the investigations of Dr. Joseph Goldberger and the Thompson-McFadden Commission.

#### New and Nonofficial Remedies.

1916, containing descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to January 1, 1916. Published by the American Medical Association, 535 North Dearborn St., Chicago, Ill. Price (postpaid), \$1.00.

New and Nonofficial Remedies contains descriptions of the newer remedies that are worth the physician's consideration. Being issued by the Council on Pharmacy and Chemistry, which is composed of chemists, pharmacists, pharmacologists and clinicians of the highest standing, it is authoritative; in fact, it is recognized as the standard.

N. N. R. also furnishes the physician who has learned how to use it with the answers to a great many perplexing questions that arise in the course of daily practice—and in many instances it is the only book which does furnish this information. What is the distinction between the action of acetylsalicylic acid (aspirin) and that of the other salicylates? What is the comparative toxicity of the various cocain substitutes? What manufacturers furnish Bulgarian bacillus preparations—medicinal foods—organ extracts? What is the iodine strength of the non-official organic compounds of iodine compared with the official iodids? What is the standing of pneumococcus vaccine—of the Schick test—of radium therapy? Look in N. N. R.; it is all there.

—R—

There is probably no state where trachoma has such a hold upon the Indians as in Oklahoma. A recent Government survey showed 88 per cent of the pupils enrolled in one Indian school in that state afflicted with this disease, while 68.72 per cent of all Indians resident on the reservations in the state of Oklahoma have trachoma.

## MISCELLANEOUS.

### The Samuel D. Gross Prize—Fifteen Hundred Dollars.

Essays will be received in competition for the prize until January 1, 1920.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page, it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. Twenty-second St., Philadelphia," on or before January 1, 1920.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

WILLIAM J. TAYLOR, M.D.,

JOHN H. JOPSON, M.D.,

EDWARD B. HODGE, M.D.,

Trustees.



## Bacterial Infection as a Cause of Rheumatism and Its Treatment.

### ABSTRACT.

The term "rheumatism," defined as "an indefinite something induced by cold and exposure, always affecting either muscle or joint, and with pain on motion as a prominent symptom," has been much abused and sadly overworked, says Dr. F. E. Stewart in the Mulford Digest. Every pain affecting the human body which could not be otherwise accounted for has been ascribed to "rheumatism."

We have been taught to differentiate between rheumatism and gout, and told that the latter is "a painful constitutional or diathetic disease, acute or chronic, with joint inflammation and chalky deposits, and an increase of uric acid in the blood," and differentiation has been made between "rich man's gout" and "poor man's gout," the former being attributed to "excess of food and sweet wine," and the latter to "hard work, exposure, ill feeding or excess in the use of malt liquors."

And now, after clinicians have been for centuries building up a wall of differentiation between "acute" and "chronic rheumatism," and another one to fence off "gout" we are told that these different diseases are not several entities but groups of symptoms caused by bacterial infection, all of which may result from a septic mouth and all more or less curable by getting rid of the cause and treating the condition.

The researches of Poynton, Payne and Rosenow have done much to establish our knowledge of infectious arthritis including its cardiac and other complications. All authorities agree that with the exception of arthritis due to the gonococci the majority of cases of infectious arthritis are caused by a streptococcus.

For the treatment of streptococcic rheumatism a polyvalent bacterin may be employed prepared from different strains of streptococci isolated from rheumatic cases, or a mixed or combined bacterin may be selected containing pneumococci, staphy-

lococci and streptococci. The pneumococcus is included because the majority of patients suffer with infectious rheumatism as the result of infection from a septic mouth and the pneumococcus is invariably found associated with the streptococcus and staphylococcus in the pockets of infection existing at the margin of the gums.

For the treatment of gonorrheal rheumatism a bacterin is supplied containing the gonococcus, staphylococcus (aureus and albus) streptococcus, bacillus coli, and the diphtheroid bacilli, because chronic gonorrhea is a mixed infection and these micro-organisms are found in a very large percentage of patients. The micro-organisms used for preparing the bacterin are taken from a large number of cases of chronic gonorrheal prostatitis and are, therefore, polyvalent.

Success in the bacterin treatment of rheumatism is largely dependent upon proper attention to Wright's directions in regard to accessory treatment. Wright calls attention to the fact that failure may result if proper circulation is not secured in the infected area. Nature walls off the infected area to the best of her ability to quarantine it from the rest of the body. Frequently this wall greatly hinders the circulation of the blood in the part infected by living microbes, thus presenting a serious obstacle to bacterin treatment. Methods for producing hyperemia are, therefore, often necessary. "Baking" the joints often proves helpful.

— R —

The next examination for admission into the Medical Corps of the Navy will be held on or about June 16, 1916, at Washington, D. C., Moston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash. Full information with regard to physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.



## UNIVERSITY OF KANSAS

### Summer Session, 1916

#### COURSES IN ANATOMY.

*First Term, June 8 to July 19.*

I (= 1, 2, 3, 4). Required of medical students. Atlases and textbooks are used as guides. The work in the laboratory is as independent as possible. Drawings and notes supplement the dissections. Quizzes are given by instructors on parts as completed. Credit is given only upon the completion of the work outlined and the passing of final examinations, both written and practical. Each course is supplemented by lectures bearing on the practical phases of the dissection.

1.—DISSECTION OF THE ARM AND THORACIC WALL. Three hours.

2.—DISSECTION OF THE LEG, PERINEUM AND ABDOMINAL WALL. Three hours.

3.—DISSECTION OF THE THORACIC AND ABDOMINAL VISCERA. Four hours.

4.—DISSECTION OF THE HEAD AND NECK. Four hours.

Lectures, 8 a. m.; laboratory, from 9 a. m. throughout the day. Laboratory fees, \$5 per course. Professor Sundwall and assistants.

II (= 6).—TOPOGRAPHICAL ANATOMY. Five hours credit in the School of Medicine. Lectures daily, 9 a. m.; laboratory daily, from 10 a. m. throughout the day. A laboratory course in human anatomy, including dissections, study of models, preparations, cross-sections. Special emphasis will be laid upon the practical phases of anatomy. This course is especially designed for physicians who desire to review anatomy. Laboratory fees, \$5. Professor Sundwall.

III (=11).—ADVANCED WORK IN ANATOMY. Credit, hours and fees to be arranged. Opportunities will be offered advanced students and graduate physicians to carry on special dissections in which they may be interested. Professor Sundwall.

Courses 1, 2, 3, 4 are designed for medical students.

Course 6 is designed for those who wish to make a complete review of anatomy. Special emphasis will be laid on the practical side.

Course 11 is particularly designed for those who wish to specialize in some branch of medicine. In taking up a specialty a thorough knowledge of the organs and parts concerned is of fundamental importance. This course ought to appeal to physicians contemplating going away for special training, as the structures can be as readily worked out here as elsewhere, thus saving time and expense.

IV (= 7).—HISTOLOGY AND SPLANCHNOLOGY. Five hours. 9 to 10:30, with 54 additional hours of laboratory work to be arranged by conference with the instructor. A brief course on the structure of the cell, followed by a systematic study of the structure of the organs. Prerequisite, ten hours of biology. Associate Professor Coghill and assistants.

V (= 8).—EMBRYOLOGY. The study of the embryology of the chick and pig, followed by a consideration of human embryology. Two hours. Prerequisite, course 7. Hours, 11 to 12, with 36 additional hours of laboratory work to be arranged by conference with the instructor. Associate Professor Coghill and assistants.

VI (= 9).—INTRODUCTORY NEUROLOGY. Lectures, readings and laboratory exercises upon the fundamentals, plan of organization and function of the nervous system, with reference primarily to psychology and pedagogy as applied to problems relating to the welfare and development of the child. Three credits. Hours 7:30 to 9:30.

This course is not accredited in the Medical School, but with certain modifications arranged by the instructors for individual cases it may be substituted for the regular course in neurology in the Medical School. Associate Professor Coghill.—(Advertisement.)

—————R—————

There has not been a single case of yellow fever in the United States since 1905.

### Hospital and Student.

"It should furthermore be emphasized that the efficiency of the teaching hospital in its main function of treating diseased and injured patients is increased not only by securing the most skilful medical staff, by the constant stimulus of their interest and activity and by the spirit pervading the institution, but also by the participation of advanced students in the work of the dispensary and the wards in accordance with the system of clinical training which I am urging on your attention. When one considers all the time-consuming microscopic, chemical and physical tests applied in modern diagnosis and necessary to secure complete records of cases of disease, it can be readily understood that the increased force of those trained to make these examinations conduces to more accurate diagnosis, and to more satisfactory control of the progress of the patient from day to day, and therefore to better treatment. In advocating improved methods of clinical training and the introduction of such training more generally into public hospitals I plead and plead earnestly for the student, but I plead also for the hospital and the patient."—WILLIAM H. WELCH, *The Relation of the Hospital to Medical Education and Research.*

### Medical Ideals.

"Let us summarize the opinions expressed: A good medical school produces good physicians. The medical profession is a very difficult one, and to meet its requirements exceptional men must receive a splendid special training. Therefore, a good medical school will accept only such students as have been selected by severe tests with high standards; it will maintain lofty ideals of knowledge, of observation, of judgment, of original thought, and of loyalty. It will uphold these ideals not only striving to furnish every important material facility in laboratory and hospital, but also by engaging able instructors. The good medical school may become great which adopts as its motto: Great professors make a great school. Let

this be your device, for the greater in ideals and achievement your school becomes, the more you will help and inspire all the other medical schools in our country."—CHARLES S. MINOT, *Certain Ideals of Medical Education.*

### Hospital Administration.

"Another serious defect in the hospitals as they are now lies in their management as general hospitals under an executive head, rather than as separate, largely autonomous clinics, the activities of which are correlated by a committee made up of representatives of the individual clinics in association with a general executive head. Until we have, as in the German hospitals and medical schools, (1) a medical clinic, (2) a surgical clinic, (3) an obstetrical clinic or a woman's clinic, and (4) the various special clinics—each organized as a separate entity, with its own staff, preferably with its own buildings, certainly with its own budget, with control vested in the department itself—the conditions under which work is done will continue to be unsatisfactory. Unless the department of surgery, for example, can admit and discharge patients at will, can decide on the kind of work it will do, can buy instruments, books, etc., whenever needed as long as the budget of the clinic is not exceeded, surgery and surgical investigation will be hampered. When these matters, for all the clinics, lie within the province of an extra-departmental authority there are apt to be unnecessary delays, arbitrary decisions and other obstructive measures which are irritating and inhibiting to work."—LEWELLYS F. BARKER, *Some Tendencies in Medical Education in the United States.*

### A University Must Think.

"The other function of a University is to think. Teaching current knowledge in all departments, teaching the steps by which the status proesens has been reached, and teaching how to teach, form the routine work of the various college faculties. All this may be done in a perfunctory man-



ner by men who have never gone deeply enough into the subject to know that really thinking about them is in any way necessary or important. What I mean by the thinking function of a University, is that duty which the professional corps owes to enlarge the boundaries of human knowledge. Work of this sort makes a University great, and alone enables it to exercise a wide influence on the minds of men."—Teaching and Thinking—Osler.

—————R—————

One swallow doesn't make a summer; and one test doesn't constitute a guarantee of satisfaction. There are always a number of aspects to every article of utility, and although it may measure splendidly up to one of these aspects, if it fails in all the rest it cannot be said to be a very efficient article. "Best by every test" is the measure of efficiency. That is the measure by which Calumet Baking Powder excels. Chemically, physically, physiologically, and domestically, it fulfills all the demands of modern science and art. It is chemically correct, physically pure, physiologically wholesome, and domestically efficient and dependable. If you can think of any other quality that ought to characterize a first class baking powder, no doubt the manufacturers will see to that, too. Personally, we can't. It looks to us as if a baking powder that can make good on those four claims is about as nearly perfect as a baking powder can be. However, you know the old proverb—"the proof of the pudding is in the eating of it." Calumet will stand that test, too.

—————R—————

It is for professional reasons and for the same of humanity that the American Highway Association would invite the practical co-operation of the country doctors everywhere in pressing the good roads movement. If each one of their number would enlist in this great practical work and become an active evangelist of this new gospel, the effect would be almost instantaneous and the officeseekers and politicians would flock to the cause like doves to their windows. The time for

working the roads with the best results is at hand, and if the country doctors could prevail upon the people in their respective districts to take hold of the subject in earnest, the roads would all be improved before the next season begins. It is not meant that the work could be finished in a few short months but that many of the rough places could be made smooth and that the bottomless pits could be bridged over temporarily at least and until permanent work could be done. That would follow once the people could see for themselves what good roads mean for their personal comfort as well as their industrial profit. Physicians are described by one of the writers in the old Spectator as "a most formidable body of men."—American Highway Association.

—————R—————

### **First University Dental School in New York for Columbia.**

Realizing the importance of the teeth and mouth infections to systemic disease, the faculty of the College of Physicians and Surgeons have unanimously voted in favor of the establishment of a dental department, to be connected with the medical school. A committee of prominent dentists of the city have presented plans to the medical faculty which have been approved.

The school of dentistry will be closely associated with the medical school and the admission requirements will be the same as the medical. The course will be four years, the first two years the same as those in medicine, thus giving the dental student a thorough knowledge of the fundamental sciences necessary to the practice of a specialty of medicine. At the end of the second year the dental student will give all his time to the study of dental subjects, namely, operative dentistry, prosthetic dentistry, oral surgery and oral pathology, orthodontia, etc., and the more technical part of the work required for the well trained dental surgeon. This new school will be the first university dental school in New York City and the second



in the state. It will give the first four-year course of dentistry ever given in the Empire State.

### —————R—————

## **Pellagra Prevention.**

### **SPRING DIET DETERMINES SUMMER SYMPTOMS.**

A faulty or restricted diet at this season of the year is the chief factor in the production of pellagra. Measures to prevent the development of the disease should be instituted during the early spring months, according to a circular of information issued by the United States Public Health Service. While the manifestations of pellagra are in most cases not in evidence until June or July, the condition invariably dates from a faulty diet of earlier months. Therefore, if due precautions are exercised by individuals at the present time the havoc wrought by this scourge may be greatly lessened, if not entirely eliminated.

### **DANGER SIGNALS.**

The report further calls attention to certain danger signals which should be recognized by those who reside in pellagrous districts or those who have had previous attacks of the disease. Among such warning symptoms are extreme nervousness or change in the mental characteristics of the individual. Weakness or debility, a disinclination to undertake the ordinary daily tasks, and unexplained digestive symptoms may all be premonitory signs. These symptoms do not, of course, necessarily mean the development of pellagra, but taken in connection with the history of a one-sided, monotonous diet, they serve as a definite warning of the possibilities of its onset.

### **SPRING DIET.**

The diet recommended by the health service for the prevention of pellagra will not produce results if followed for a week or ten days only, but if continuously and consistently used, under circumstances similar to its administration in the various institutions where the experimental tests

have been performed, it will protect the individual against the development of the disease. Necessarily, a rigid unvaried diet is wholly undesirable and the menu recommended is only to indicate in a general way the character of the food to be prescribed. Frequently the element of poverty, inaccessibility to market supplies, or even personal idiosyncrasy, may require some modification of the diet table, so that strict adherence to its components may not in all respects be practicable. The object of the diet as submitted is to minimize the consumption of the carbo-hydrate (starchy and sweet) foods and to increase the amount of fresh animal protein and of fresh legumes (peas and beans).

The breakfast, for example, should consist of oatmeal and cream, without sugar, with either ham or breakfast bacon and two eggs. Not more than two thin slices of whole wheat bread should be taken, preferably untoasted. Hot bread or biscuits are inadvisable. A glass of fresh milk is to accompany the breakfast and either oranges or grape fruit may be the initial course. The dinner should consist of either pea or bean soup, prepared from dried peas or beans, with a meat stock. The meat may be beef, pork, ham, chicken, veal or mutton, prepared in whatever manner is the most appetizing, preference being given to roasting or broiling rather than frying. Hamburger steak, meat hash, or fish may be substituted to afford variety. Care should be exercised that the meats are not overdone. Of vegetables, Irish potatoes, boiled in the jacket or baked, cabbage, turnip or mustard greens, collards and lettuce, are to be recommended. For dessert, steed, fresh or dried fruit will prove sufficient. The dinner should be accompanied by not more than two thin slices of whole wheat bread and a glass of buttermilk. The supper should consist of pork and beans, or baked beans properly seasoned, the usual amount of bread and a glass of buttermilk. If preferred, eggs, scrambled or otherwise prepared, may be substituted for the more substantial ingredient of the meal.

**DIET CHEAP AND AMPLE.**

A diet such as the above is not prohibitive as to cost, at least to but few of the residents of the country, affords a sufficient number of heat units, if taken in reasonable quantity, and will effectually prevent the development of a disease which alone caused 8,000 deaths in the United States during the past year.

—————R—————

The United States Civil Service Commission announces an open competitive examination to be held on April 25, 1915, for the position of Chief Statistician for Vital Statistics (Male) in the Bureau of the Census, Department of Commerce, at a salary of \$3,000 a year. Persons interested may obtain application blanks by addressing the Commission or one of its representatives.

—————R—————

**New Buildings for Rockefeller Institute.**

The Rockefeller Institute for Medical Research for New York and New Jersey has planned to erect buildings on newly acquired property in South Brunswick township, near Plainsboro. The following buildings have been contracted for: Laboratories at a cost of \$90,615; power house and tunnels, \$102,556; operating building, \$27,838. The work is to be finished by September 1.—Jour. A. M. A.

—————R—————

This is your Journal. Patronize the advertisers who patronize you.

—————R—————

From an article on "The Health Department's Attitude Towards Alcohol," in the Bulletin of the Department of Health of New York City, we quote: "The Department of Health has no sympathy with and will take no part in legislative or police restrictions or attempts to limit personal liberty in the use of alcoholic beverages. The spread of accurate information among the people as to the effects of alcohol can be depended upon to accomplish more than laws restricting its manufacture or sale."

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# THE JOURNAL

*of The*

## Kansas Medical Society

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No. 5

### Non-Union of Fractures.

L. T. MORRILL, M.D., Peabody, Kan.

Read before the Marion County Medical Society, February 9, 1916.

My subject, Non-Union of Fractures, is rather extensive and covers considerable ground, it will therefore be impossible for more than a cursory glance at this time.

Non-union of bone in fractures has reference to imperfect results, following attempts to obtain perfect union, a result of vast importance to the patient and of serious consideration to the surgeon. First to the patient, for it is he who bears the suffering and inconvenience, next, to the surgeon, on account of the extreme disagreeableness arising from the knowledge of having attempted to do what, after a sufficient lapse of time, he finds he has not done. Of all the failures of a surgeon this seems to me one of the most aggravating. Of a fact it may be said, there are extenuating circumstances in the surgeon's favor. The patient may have disobeyed some important instructions or advice, or there may be some latent taint in the patient's system that has only awaited a sufficient call to answer and show itself, nevertheless the one fact remains, the surgeon has failed to obtain union and the patient, with a false joint, confronts him as if to present an unanswerable argument against him.

Let us for a moment look into this subject and take notice of some of the more important causes of non-union of bone. The chief cause, in my opinion, is syphilis, especially will we find this the case in hospital practice. Other causes are gout, cancer, old age, where the reparative pro-

cess is vastly diminished. Debility is another cause, also in case the patient should be obliged, directly after his injury, to pass through any of the febrile diseases there would then be danger of non-union if the fractured ends (sometimes owing to the surgeon's fault) of a bone are allowed to move upon themselves, after the proper dressings have been applied. The effused lymph which is always thrown out from an injury of bony tissue, instead of ossifying and forming a callus, will either be converted into bands of fibrous tissue, uniting the broken ends of the bones, or else the ends will be covered with synovial membrane and surrounded with a ligamentous capsule, forming what is commonly termed false joint.

There is no doubt that the reparative processes are very much delayed, if the vital powers are exhausted by age and debility, or if the system is under the influence of any of the before mentioned diseases.

Sometime ago a case was related by Mr. Traver, of London, where a man had received a fracture of the middle third of the right femur and a fracture of the left humerus, also an injury to the spine, resulting in paraplegia. The fracture of the arm united in the usual time, but the fracture of the femur failed to unite. The paralysis of the extremities lasted for five months, at the end of that time an operation was performed, without success. In such a case it is an easy matter to determine what was the cause of non-union. The condition of paraplegia caused a lessened vitality of the parts and no repara-



tive processes would take place in the way of throwing out new bone cells.

Pregnancy is also a cause of non-union, as quoted by some authors. I wish to express some doubt as to this matter. I have had under my care quite a few of such cases. I can call to mind two cases, one a fracture of the tibia, and one a fracture of the femur, both of which made good recoveries in the usual length of time. I do not presume to say that non-union never takes place in the pregnant woman, for under unusual circumstances it might occur, but men of large surgical practice have stated that from their observation, it is very unusual.

Age of itself, without constitutional diseases does not seem to present any unfavorable results as regards good union of bone. A large number of cases are cited of persons above ninety years of age who have had perfect use of their limbs after fracture.

The local causes of non-union are various and important. The anatomical condition of the fragments as regards their vascular supply, is perhaps that on which union is most immediately dependent. For proper union to take place it is necessary that the callus be deposited from both ends of the fracture, if one fragment is so situated that sufficient blood is not sent to it, not only non-union, but necrosis may occur. We often see examples of this in superior articular ends of humerus and femur. In intracapsular fracture of the neck of the humerus, the globular head being detached from all its vascular connections may necrose. In intracapsular fracture of the neck of the femur the head of the bone still retains some vascular connection through the medium of the ligamentum teres, has sufficient blood furnished to it to prevent its death, but not enough to form callus, hence fibrous union takes place instead of necrosis.

In the shafts of the long bones, the degree of union will be dependent in a great measure on the condition of the vascular supply to the fragments, through the medium of the nutrient artery. The in-

fluence of the rupture of the nutrient artery of the bone by the line of fracture running across it and thus interfering with the vascular supply of one of the fragments has been investigated and studied by surgeons on both sides of the water, and the occasional occurrence of atrophy of the bone after fracture has been shown to be dependent upon the supply of arterial blood through the interruption of this vessel. Sufficient cases have been collected that more than prove the direct connection between the occurrence of ununited fracture and the want of proper arterial supply to one of the fragments.

In the humerus the course of the nutrient artery is downward. In fourteen cases that came under my observation of ununited fracture of the humerus, ten were above the nutrient artery, in the forearm, where the nutrient artery passes from below upwards, eight cases were seen of ununited fracture, seven of which were below the nutrient artery and one above.

In reading up on this subject I find statistics of about the same ratio. It is shown, however, that the number and size of the nutrient arteries, as well as position, varies considerable, and hence the objection that some surgeons put forward, that non-union may occur in a fracture of any part of the shaft of a long bone, whereas the nutrient artery is only found at one spot, can scarcely be considered a very valid one.

We are perfectly aware that it is owing in a great measure to this want of vascular supply that intracapsular fracture almost invariably unites by fibrous tissue, rather than by bone, and when bony union does take place the callus is chiefly formed by the surface connected with the shaft. Some bones are more liable to non-union than others. According to reliable authority, it would appear that the femur, the humerus, the bones of the leg and of the forearm, and lastly the inferior maxillary, are those in which ununited fractures more frequently occur, and in the order I have mentioned them.

The treatment of ununited fracture must

be constitutional as well as local. If after the usual length of time we find the bone not united, we should immediately reapply the dressings, commence constitutional treatment with some preparation of iron or the hypophosphites. I have had good success in administering large quantities of lime water in connection with the iron. It is always well before applying the dressings to seize the two ends of the bone and rub them against each other several times in order to obtain a slight degree of inflammation, thereby aid in forming new bone cells. If, after two or three weeks, upon examination we find the same condition, I should immediately repeat the last treatment, more particularly the rubbing together of the ends of the bone somewhat more briskly than the last time. After further failure it is only a question of an operation and what kind. Hypodermic injections of iron or iodine between the fragments might have a trial, or introduction of acupuncture needles. The operation of tenotomy might be found serviceable, that is the division of the ligamentous union that has already taken place. This will of itself often create sufficient inflammation to result in plastic lymph finally forming new bone.

Huntington claims that from eighty to ninety per cent of long bone fractures can be successfully treated by the closed method. Conservative treatment exacts a high degree of skill and close attention to details. He says the resort to the open method is of too frequent occurrence. The least possible amount of foreign fixation material should be the rule. Steel plates in the treatment of fractures are a menace from the standpoint of permanency. The bone implant is the fixation material of choice. Intramedullary splints are inferior to the autogenous bone implant. Fixation material of whatever type is not to be relied upon for maintenance of alignment.

As a general proposition cases of non-union and faulty union which come to secondadry operation indicate indifferent methods of primary treatment. Operative treatment of compound fractures should be

withheld until the external wound healing is perfected. Many of the joint fractures can only be treated successfully by the open method. Normal contour and good function are closely related in end results of all fractures.

Mr. Campiche, M. R. C. S., England, said at the San Francisco meeting of the American College of Surgeons, that "The pendulum has swung too far in the direction of operative treatment of fractures.

Because of some unsatisfactory results in the conservative methods, the operative treatment of fractures has gained some ground in the last decade, and has justly become the treatment of choice for a few types of fractures.

Unfortunately many surgeons, following such extremists as Arbuthnot Lane, have attempted to operate on all fractures, without indications of any sort. This policy makes things much easier, of course; it does away with the study of anatomy and the study of the different types of fractures; the surgeon does not have to think any more, not even for the diagnosis, as this is given to him by the Roentgen rays; he does not have to think about the treatment as it is the same—plating in all cases; he just becomes a mechanic! When a ready-made treatment of this kind takes the place of thought and individuality in surgery, we may expect queer things to happen. We see many offenses against reason and common sense. There is the man who screws an enormous steel plate on the poor little ulna of a baby; the man so ignorant of the extension methods that he holds himself justified in plating the femur of a young child; the man who is in such a hurry to operate that he plates a fractured leg with doubtful circulation, to find out, four days later, that the limb is gangrenous and has to be amputated; and the man who plates everything in sight, even a Colles fracture! Think of this venerable fracture which has been known to the surgical profession for one hundred years! All during that century its treatment has been more and more simplified, so much so that Professor Lexer now



merely dresses this fracture with a flannel roller bandage! What would Colles say if he knew that there is a man who has hit on the brilliant idea of plating this inoffensive fracture?

It is not easy to fix the proportion of such indefensible and worthless interventions; I have to guess at a figure, but I have strong reasons to believe that about 80 per cent of the operations now done in fracture cases are utterly unnecessary. Indeed, the vast majority would heal much better if left alone and if some busybodies would stop interfering with them. Jonas, reviewing the operative treatment of fractures in 1910, asserts that many fractures plated according to Lane would do just as well without operation; and the same opinion is held by many surgical authorities.

These offenses against common sense, however, sad as they may be for all concerned, are nothing in comparison to the harm done to the patients in case of accidents, and these are by no means rare! The results of conservative methods were bad, we are told, but we have on hesitation in saying that the results of operations for fractures are often worse and sometimes distressing. It is, of course, much to the disadvantage of the conservative methods that a man with a crooked arm or a shortened leg will walk all his life as an opprobrium to the surgeon who has treated him, while the man operated on and dying of septic infection will join the silent majority and will never be heard of any more; and, of course, reports of these cases are not published. But if we listen to the conversations of assistants, nurses, relatives and patients, we hear on all sides many interesting stories of plate removals, endless suppurations, delayed union after plating, deformity in spite of plating, refractures, septic infections, etc., so that we feel justified in concluding that in many instances—well authenticated and well known to us—the operation done for a fracture was not only unnecessary but was directly injurious to the patient.

Why must we be so cautious in this par-

ticular field of surgery, while, with the perfection of modern asepsis, we can confidently promise a healing by first intention in nearly all other clean cases? Because there are some dangers of a very special kind inherent in recent fractures which are not encountered in other aseptic conditions, and which must not be minimized and must not be ignored. These are, first, the well-known danger of infection so liable to invade all bruised and traumatized structures, and second, the deficient callus production which is the rule in the presence of a foreign body.

There is still a most undeniable danger of infection in fracture operations, even in the hands of the best surgeons. (1) The field of a recent fracture is an excellent culture medium. The bruised tissues, the fragments of bone denuded of periosteum and badly nourished, the hematoma, the impairment of circulation, all constitute the best possible conditions for the rapid growth of micro-organisms. (2) There is one source of infection that cannot be eliminated, even in the advanced stage of development of modern asepsis, and that is the skin of the patient. The hands of the surgeon cannot be incriminated because they are covered by sterile gloves.

A marked deformity in itself (if not attended by loss of function) is not an indication to operate (for example, a large callus on a clavicle, or a large callus on a femur without shortening). Nor is our wish to secure a good cosmetic result a sufficient reason to operate, nor the fact that the operation is easy; nothing is easier in the world than wiring or plating a bone that lies directly under the skin, such as the clavicle or the tibia, and that can be done so quickly that the risk of infection would probably be small. We know that, but it is our duty to refrain from doing such operations if we think that the same functional result can be attained without operation.

The preliminary report of the American Committee on Fractures is entirely too favorable to operative procedures, and many of the fractures it would allow



skilled surgeons to operate would heal just as well if properly treated by conservative methods.

It is a fundamental fact, accepted by all in fracture work, that a good anatomic reduction and fixation of the fragments is essential in order to obtain a good function of the limb. But this excellent principle has been carried *ad absurdum*! The friends of the operation 'a *outrance* want a bone to have exactly the same geometric outline as it had before the accident, while experience has proved conclusively (see Tuffier, Scudder and others) that in most cases this is not at all essential, and that a general good alignment of the fragments will give an excellent functional result even if there remains a slight lateral dislocation (in transverse fractures) or a slight overriding in oblique fractures. Yet many operations are undertaken not at all as a necessity to insure good function, but simply and solely to satisfy the sense of anatomy and geometry of the surgical eye, and this cannot possibly be accepted as an indication.

If, then, conscious of the risks involved and of the great responsibility we assume when operating on recent fractures, we restrict such intervention to the cases in which they are clearly indicated, a change will come in the methods and in the results obtained. Instead of looking on the plating of fractures as an everyday procedure, which is crowded into a busy morning list at the hospital, between uterine curettements, adenoids, tonsils, circumcisions and other things of relative asepsis, the assistants and the personnel will come to look on a fracture operation as something rare, as an intervention of higher dignity, the preparation for and the conduct of which must be more solemn than that of a laparotomy, and whose consequences in a case of failure mean disaster for the patient, and a blot on the reputation of the hospital and of the operator.

The surgeon will devote more time to prepare himself thoroughly, so as to operate neatly and above all rapidly by the

simplest and quickest method; not only will he follow the Lane technic, but also he will do all in his power to avoid the contamination of the bone surfaces by contact with the skin of the patient. The knife which has been used for the skin incision shall not be used for any other dissection; if the incision is too narrow and there is danger of the skin rubbing against the fragments of the bone, the surgeon will not hesitate to add lateral incision so as to divide the skin into flaps which can be better retracted and, if necessary, fixed out of the way by temporary stitches. He will always try to succeed with the most simple appliances and use the minimum of foreign material to insure fixation.

It is these and many other little details that count, and if fracture operations were carried out in this way, we could take their risk with confidence and recommend them to the patients with the conviction that we are fully justified in doing so.

I cannot conclude this part of the paper without remarking on the steady improvement of the conservative methods in the last decade. Under the influence of Calot and other orthopedists the making of a plaster cast has become a work of precision, exact and accurate in all details, so that it now yields much better results than formerly. The tendency to replace the circular plaster bandage by plaster splints, allowing early massage and movements, must also be hailed as a distinct step forward for many cases. Another great improvement is the much shorter immobilization of fractures of all bones which have not to bear weight, and also the general use of massage, with the understanding that, in fracture cases, massage should never be prescribed on a sheet of paper, like a drug, and left to a mechanical masseur, but should always be done by the surgeon himself, as early as possible and as long as necessary.

The greatest advance has been made in the technic of extension, especially by Bardenheuer and Heusner, whose methods have taken the place of the old Buck and Volkmann extensions. It is the consensus

of opinion in Europe that Bardenheuer's results are probably the best that have ever been obtained in fracture work by any method, and it is a matter of great surprise that his name should be so seldom mentioned here.

Robert Jones, analyzing the report of the Committee on Fractures of the British Medical Association in 1912, says that difference in good results in recent cases (79 per cent with operations and 70 per cent with the old conservative methods) is so small that it could easily be made up by the improvement of the old procedures, in which I heartily agree with him.

It seems to be the opinion among most surgeons that such experiments as plating bones or cartilage, opening articulations to nail some fragments, etc., commonly done in animals with normal tissues full of vitality, cannot be accepted as conclusive for similar intervention in human beings whose tissues have been the seat of a severe trauma.

But, although I fully appreciate the good pioneer work done in this direction, I am not quite convinced that joints which are bruised and the seats of fractures and hematoma in men will behave as nicely as the perfectly healthy joints of animals, which have more resistance to infection than man has anyway."

Now, if all of the above mentioned methods fail, then the operation for resection or amputation is required. In resection remove the ends of fractured bone preferably with the chain saw and unite them with silver wire sutures, treating the case in the meantime as a compound fracture (I have used kangaroo tendons in one case) the application of plaster paris dressing will be of great service, as it retains the parts in perfect apposition. If this form of treatment should prove a failure the only other alternative is amputation.

The first case I wish to report was D. C., age 60. Received a compound fracture of middle third of tibia and fibula by a fall from a ladder; was taken to his home. I immediately reduced the fracture, applied plaster of paris dressing with slight exten-

sion. At the end of five weeks removed dressings and found that union had not taken place. I immediately commenced moving the fractured ends, applied plaster dressing the second time and in six weeks removed all dressings and found union, but not enough callus had been thrown out to satisfy my mind as regards his using it. I applied starch bandage and continued internal treatment of Churchill's syrup of hypophosphates, which he had been taking since I first became aware of the difficulty of obtaining union. At the end of four weeks or two and a half months from the time of injury, I found a good, strong limb with sufficient callus to make it perfectly strong; there was about one-eighth of an inch shortening.

Case 2—Mrs. R., age 40, mother of five children, fell down a flight of stairs fracturing middle third of right femur. I saw her six weeks after the accident. In the meantime she had received the usual treatment consisting of extension and counter extension. On my first visit I found that the dressings had all been removed and on examining the limb I at once saw there was no union. She presented a very fair appearance as to health, her weight was about 160 pounds, appetite good, tongue clean. I could not see why union had not taken place. I was satisfied there was sufficient ligamentous union to prevent the ends from slipping by each other. I applied plaster bandage, gave phosphates internally, and at the end of six weeks found I was at the same point from which I had started. I could get no history of specific disease or gout and there was no lung trouble. For a time I was puzzled, but on reading a copy of the Record one day I came across a case similar to my own, where a surgeon had introduced acupuncture needles with a good result. His object was to obtain an inflammatory condition of the parts, and that was just what was needed in my case. I did not care to use the needles in that way, but I introduced a seton from above downwards directly between the fractured ends of the bone. This seton was composed of silk



ligature doubled upon itself twice, and this I left in for twenty-four hours. At the end of that time I removed the seton and applied plaster dressing, allowed it to remain for six weeks, the patient in the meantime moving about the house on crutches. At that time I found pretty good union. I have sometimes thought that the trouble with this fracture was from a portion of the rectus muscle becoming entangled between the fractured ends. The patient presented a good history in regard to any specific disease and seemed entirely free from any constitutional trouble.

Case 3—Was called in consultation to see T. B., age 21, who had received a blow on the arm from a club, fracturing both bones of the forearm. The usual dressings had been applied and, after the space of four weeks, were removed and no union had taken place. At this time I saw him for the first time. The fracture was in the middle third of left forearm. There was a very slight ligamentous union. In obtaining his previous history I found that three years previous to receipt of injury he had been inoculated with syphilis, which had been allowed to take its own course. Six months later he had a rash upon his forearm and neck which lasted for some time, and at my examination could distinctly notice a faint hue of coffee-colored spots upon the neck below collar band of his linen. On examining the throat I found the right tonsil considerably smaller than the left, showing evidence of previous ulceration. The uvula had almost entirely disappeared. There could be no doubt in this case as to the cause of non-union. I immediately reapplied the dressings and ordered constitutional treatment consisting of cod liver oil, tablespoonful after each meal, and a mixture of potassium iodide with bin iodide of mercury. In eight weeks removed dressings, found partial union, reapplied them the second time for four weeks longer. At the end of that time there was very good union. Ordered the continuance of internal treatment.

To recapitulate in case 1—I diagnosed

the cause of the non-union to be from general debility. In case 2 I have no doubt but what a portion of the rectus femoris had become entangled in the fragments, thereby preventing union. In case 3 there can be no possible doubt but what specific disease was the real cause of imperfect result obtained after the first treatment.

There are a great many cases of non-union on record from all of the different causes I mentioned in the previous portion of my paper, and none give such good results as those resulting from specific diseases, unless the tertiary stage has become evident, then the treatment and success is very doubtful.

Dr. Alexander Patterson, in a recent journal, relates a case of non-union with a very novel way of treatment. D. M., a marine engineer, while at sea in January, 1873, sustained a simple fracture of both bones of the left forearm about an inch and a half above the wrist joint, caused by his having been driven by a heavy sea against a life boat. The arm was put up in splints and kept up for some weeks. On the removal of the apparatus it was found that the bones had not united. He did not reach land for eight months after the accident, was admitted into Glasgow Infirmary October 7, 1873, in good health, age 43, nine months after receipt of injury. Immediately upon his entrance to the wards the surgeon in charge performed subcutaneous incision of the flexible fibrous articulations and the arm was put up in splints for three weeks, but as union did not seem inclined to take place incisions were made along the tract of the radius and ulna and the bones resected. The arm was again put up and matters were progressing favorably when at the end of four weeks erysipelas set in and during its course necrosis of about three-fourths of an inch of the radius occurred. The limb was again put up in splints and retained so for six weeks longer, when the external wounds were found to be healed but the bones had not united. Patient then left the hospital, having been confined in the wards for three and a half months.



August 15, 1874, the man was readmitted for the purpose of having the arm amputated. After a consultation among eight surgeons the operation was agreed upon. At the same time permission was granted one of their number the use of four weeks to make any possible attempt to save the limb. This surgeon, on giving it a thorough examination, found the cicatrices of the former operations lying on the inner and outer side of the false joint. The hand and lower fragments were drawn somewhat up towards the elbow and hung swinging about completely helpless and powerless. The lower end of the fragment of the ulna formed a hard, smooth projection, over which the skin was tensely drawn. On the 14th of September, 1874, the man was taken into the amputating room and placed under chloroform, while at the same time a large sized bird dog was being chloroformed. An incision was made along the ulna side of the arm, cutting down upon the ends of the fractured bone and removing the fibrous bands which alone formed the band of union. The rounded joints were removed by the saw and a hole drilled obliquely through each squared end. The same process was repeated upon the radial side when it was found an interspace of three-quarters of an inch existed between the two fragments of the radius. In the meantime one of the senior students had exposed the humerus of the dog, completely denuding it of every tissue, except the periosteum. The length of the bone was accurately measured three-quarters of an inch, while from one-half an inch beyond the end of the necessary length the periosteal covering was rapidly but carefully dissected, the bone sawed through, a hole drilled in either end obliquely, as had been done in the radius and ulna, and at once placed between the ends of the radius, which it fitted accurately. Wires having been passed through the holes, the bones were firmly tied together, the loose half inch periosteum of the foreign bone being carefully spread over the periosteum of the radius. The wound was stitched with silver wire, the bone sutures

coming out at each end of the incision, wires were passed through the ulna, tied together and the wound treated in a similar manner. The entire operation was conducted under the carbolic acid spray. The arm was put up in gauze and held in two rectangular splints. Patient complained next day of considerable pain in the arm, but had slept some during the night under the influence of anodyne. The dressings were changed regularly up to November 3, when the ulna was found to be firmly united, but on the radial side, small pouting granulations appeared as if a foreign body were present, which, however, could not be detected by the probe. November 28 the patient was put under influence of chloroform and the wire sutures removed. The ulna wires were removed with great ease. Over the seat of the fracture on the radial side was seated an elongated patch of extremely soft granulations. At the upper end of the patch the wire was caught and easily removed. The other required considerable amount of force to remove it, although the wire came away complete, it seemed to have broken in the bone by the force required to remove it. On examination with the probe dead bone could not be detected, although the appearance of a small wound led me to suspect its presence. The fracture looked upon the whole to be firmly united and the patient was dismissed with strict orders to return weekly and have it dressed and examined. Thirteen weeks elapsed since the removal of the wires, which were perfectly bright. The wounds having been treated antiseptically throughout. The man gained in weight and improved much in appearance. The small wound remained open for twelve months, when the dog's bone, reduced to about half its size, came away, after which the wound healed completely. The radius seems to have fallen in somewhat towards the ulna, leaving a slight deformity.

Although in this case the principle of the operation failed, yet the result was good, the man regained perfect use of his arm and was able to resume his work on ship-

board. No doubt, this surgeon, thinking of Oliver's experiments with the periosteum, of the transplantation of skin from an amputated limb to ulcers, and of the transference of the mucous membrane of the rabbit to the human eye, had some hope that the strange bone might find a new home for itself in the human arm, failing in which he knew it would secure perfect alignment of and steadiness in the ulna fragments, and as he himself states, should a similar case happen he would adopt the same process, still hoping that the two bones might become one. His report does not state what his opinion in regard to how the radius united was, but I think it is quite easily explained, the dog's bone was three-fourths of an inch long and the periosteum of this bone was one-half an inch longer at each end than the bone itself. Now this periosteum he allowed to overlap the human periosteum of the radius and from this periosteum (which of course must have united to the periosteum of the radius) new bone cells were thrown out of the plastic lymph which was deposited around the bone and gradually as these cells came together and bone commenced to form, it pushed to one side the foreign bone and after a sufficient length of time Nature threw it off.

It may be asked how the dog's bone was lessened to one-half of its size, that I would answer in this way: The natural powers of absorption to which any foreign body is subject took place in this case. For fear that some lover of electrolysis might question me in regard to the treatment by electricity in non-union of bone, I would state that some time ago I noticed the report of a case in one of the New England Journals, where needles were introduced between the fragments and the constant current applied. I do not remember the author, nor the particulars of the case, but, as no paper is complete at this day without some reference to that mode of treatment, I thought best to mention it.

A few remarks in regard to the specimen before you, and I have done. The previous owner of that humerus, J. B.,

age 42, fell down the shaft of a mine in Northern Montana; the fall was about 106 feet, resulting in fracture of skull and several ribs on each side, with the before you addition. This happened in 1879. I was called to see him, and to make this as short as possible, will state he completely recovered from all his injuries, with the exception of this arm. For two years I tried about every way that was known at that time to obtain union, all of which resulted in complete failure. I was unable to get his consent to operate in any way. He was as stubborn as a mule. Five years after the accident he died of mountain pneumonia. About a year after burial I was enabled to obtain this specimen and it was all I did get in the way of recompense. When I obtained it all three pieces of bone were united by fibrous tissue and ligaments.

When alive, the man could carry a bucket well filled with ease, by holding the arm straight down, could use his fork at the table, and was a perfect demon in a fight. Naturally there were two false joints, as indicated by the fractures.

It is very easy for us all to imagine the treatment this fracture would receive if it happened at the present day. I would love to have a case of similar character.

Gentlemen, you are aware that upon this subject I have merely skimmed the surface and I have left unsaid an immense number of material facts.

—————R—————

### **Case of Paralytic Ileus.**

G. R. GAGE, M.D., and C. W. HALL, M.D.,  
Hutchinson, Kansas.

Paralytic ileus after severe abdominal operations of every type is common. It follows local traumatic peritonitis, trauma and exposure of intestines, from ligated stumps of mesentery, thrombosis of vessels and numerous other causes. This particular case has been of much interest to us and necessarily a great amount of anxiety because of the peculiar anatomic relations encountered.

CASE: Patient, male, age 36 years,

weight 116 pounds, occupation farmer, admitted to Methodist Hospital August 15th, 1915. Referred by Doctor A. Cochran.

**FAMILY HISTORY:** Father and mother, three brothers and three sisters living and well, one sister died during infancy, cause unknown.

**PAST HISTORY:** Had diseases of childhood, no other serious illness.

**PREVIOUS HISTORY:** Patient states that he has always been in the best of health until twelve years ago when he noticed an enlargement just below the umbilicus. Eight years ago, while lifting, he had a sudden pain in this region and at intervals has continued to have it to the present date. Two years following this he had a severe pain in right side accompanied by nausea and vomiting, which was diagnosed as appendicitis and kept him confined to his bed for a week. From that date (1909) to the present time he has had three distinct attacks of pain in the right side.

**PRESENT COMPLAINT:** On the morning of August 13, complained of pain in right side. While backing wagon out of barn had a sudden pain in region of hernia. While on way to town his pain became more severe. Dr. Cochran told him that he had acute ex-acerbation of his appendicitis, with trouble also in the hernia, and advised him to be operated upon at once. Nevertheless the patient returned home, the pain became less severe and the bowels moved slightly, but there was a large amount of gas passed per rectum and he was relieved by vomiting. The second day, or the 15th, he again returned to see Dr. Cochran, who insisted that he be operated at once.

**OPERATION:** He came to operation with slight rigidity on the right side, a small mass about the size of an egg in the hernial sac, with general pain across lower abdomen, pulse 82, respiration 24, temperature 99. We made an oval incision over the hernia and opened the sac; it

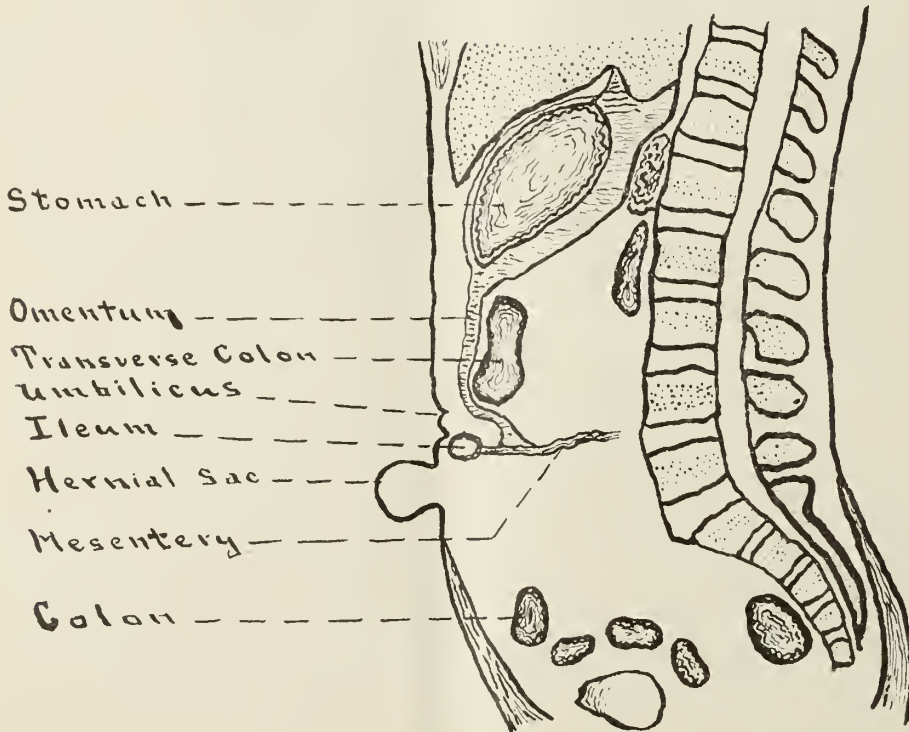


Fig I.



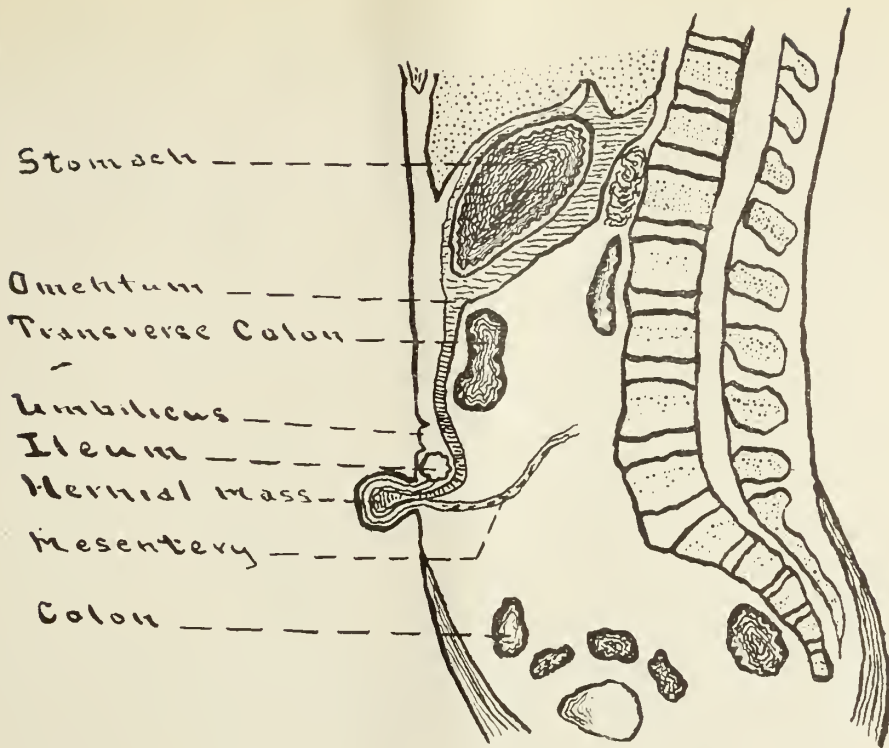


Fig II.

contained a portion of omentum, and mysentery of the ileum. We opened the neck of the sac, but before freeing the adhesions I ran my finger around the mass. There we found an apparently tight band extending toward the right iliac fossa, which later proved to be the ileum. In reducing the mass we found that a portion of the greater omentum had become adherent to the mesentery of the ileum, and together they had entered the sac, the mesentery being stretched over the hard indurated portion of omentum, like a glove over a finger. The ileum had the normal appearance, and blood supply seemed excellent. The intestine was not markedly distended or kinked. We ligated the indurated portion of omentum and explored the right fossa, where we found a firm immovable mass. We closed the hernial wound and made a gridiron incision at McBurney's point. We found a gangrenous appendix, with some discoloration of the cæcum. The appendix was re-

moved, the ileo-caecal valve was found patent, drainage was established, and the patient returned to bed.

Ten hours later he began to complain of discomfort, distention and pain in the lower abdomen. He was given several gas enemas without results, the water returning at first slightly colored and finally clear. The distention became more marked and at the end of eighteen hours he began to vomit, which later became fecal in character. We used different enemas and drastics without avail. During the rapid distention we could not determine any peristaltic movement of bowel or borborygmus. At the end of twenty hours the patient was in a state of shock, pulse 56, respiration 34, temperature 97.4. We reopened the abdomen through the gridiron incision, found a water colored fluid free in the peritoneal cavity. The upper portion of the ileum was greatly distended, while the lower portion and the cæcum were flaccid. It was of good color, but seemed lifeless.

As the patient's condition would not justify extended exploration, we finally made a stab wound with drainage in the mid-line, and an ileostomy through the gridiron incision. Two large stay sutures were used in closing the wound. The patient was returned to bed in the extreme Fowler position and tap water started per rectum. Two hours later the pulse was 86, temperature 100, respiration 24. The patient was given stimulation hypodermically and large quantities of water were given by bowel each day. His condition gradually improved and we gave him all the nourishment he would take per mouth as well as rectal feeding every four hours. At the end of twenty-one days he was up in the chair and had gained some weight. We injected different material into the distal portion of the ileum to determine its patency, but we were unsuccessful in our efforts to get a passage through the lower segment. We reopened the abdomen through the same incision on September 15, or thirty days following. We found a gangrenous condition of twenty-two inches of ileum, or rather from the point where the mesentery had been included in the hernia to within six inches of the ileo-cæcal valve. There were numerous thrombi in the mesenteric vessels. A resection of this portion and a lateral anastomosis was made. Two large stay sutures were inserted through the gridiron incision and wound packed with iodoform gauze. He made an uneventful recovery and at the end of twenty-six days left the hospital. There was some leakage for several weeks from the anastomosis, which finally closed. His incision has united firmly without any evidence of a hernia. His bowels are regular and he has gained twenty pounds, now weighing 136 pounds.

**SUMMARY:** 1. The importance of the rare instances where only the mesentery and omentum are found in the hernial sac.

2. The paralytic condition of the ileum associated with a gangrenous appendix.

3. The utmost importance of using the gridiron incision.

4. The necessity of making artificial

anus and free drainage early in cases of paralytic ileus.

5. The importance of rectal feeding and abundance of water by bowel in such cases.

—————R—————

### **The Early Serum Treatment of Diphtheria in Children.**

FRANK C. NEFF, M.D., Kansas City, Mo.

Read before the Northeast Kansas Medical Society at Kansas City, February, 1916.

The more one sees of clinical diphtheria the more one realizes the necessity for early diagnosis. There is nothing new in this statement, but the too numerous deaths from this disease show that there is great improvement needed. Knowing what antitoxine can do if given a chance we can expect much greater reduction in the mortality.

Reiche during the past year published the reports of the Hamburg epidemic. In 6,250 cases the mortality was only 4.4 per cent when antitoxin was given the first day of the disease and rose to 33.6 per cent on the seventh day. These cases were all carefully diagnosed by bacteriological and cultural examination.

These facts are borne out in the practice in this country where we have seen the frequent deaths in individuals where serum administration was delayed for one reason or another for several days and as we have observed sometimes a whole week. The greatest number of neglected treatments is found in the cases where nose and throat symptoms were not suspected or were not thought serious enough to call a physician. We cannot prevent this except in teaching the laity the possible seriousness of every case of sore throat. The public is already fearful of all cases of croup, which however in infants under one year of age is seldom diphtheritic, over one year is often diphtheritic. In communities where osteopaths, chiropractors and others of like inexperience in contagious diseases have the medical care of the family, we can understand why cases are not recognized and we can see the duty of the health authorities in forbidding anyone but a physician experienced

in the practice of medicine from treating diphtheria.

Taking conditions as they are we are directly concerned only with the cases to which we are individually called. Seeing a case presenting acute, bloody or profuse nasal discharge, a sore throat or a laryngeal stridor, it is our place to determine at once whether the disease is diphtheria. Certain it is that these may often give a positive culture where the clinical appearance little resembles the disease. It is necessary then to confirm the diagnosis at once by microscopic examination or to administer antitoxine without waiting. Through the health board or the pharmaceutical houses, every physician can be kept supplied with culture tubes for immediate use. These can be inoculated with a swab from the nose or throat, preferably both, and sent at once to the nearest physician or laboratory equipped for diphtheria examination.

Speaking from a considerable experience in the contagious disease hospital one finds that cases are delayed frequently several days pending definite conclusions as to diagnosis. Furthermore cases are given an inadequate dose of one or two thousand and then days elapse before it is recognized that the case is not doing well and further antitoxine given.

Large doses are as safe as small ones so there is no objection to giving adequate doses. The expense should not figure in the question. In fact as one good-sized dose is all that is necessary, the expense is no more and the pain of injection much less if only one dose is given. Expense must not be considered in a life-saving measure such as antitoxine. In fact health boards usually furnish serum to poor individuals. In cases where shock reactions are feared because of serum administered weeks or years previously, a preliminary injection of one c.c. out of the serum tube can be administered, watching for untoward results, and followed in a half hour by the remainder of the syringe contents. Anaphylaxis is such a rare manifestation and antitoxine such a necessity that reac-

tions are of secondary importance. In fact serious reactions are rare.

Given a case of diphtheria our object then is to administer a sufficient dose at the earliest moment. Every hour permits the development of toxine which circulates throughout the body and does immediate damage. It must be counteracted by the antitoxine before it has united with the cells of the body and has become bound to them, after which it is reached with difficulty. Antitoxine neutralizes the circulating toxin and probably to a certain extent some of the toxin already combined with the tissues before too much injury has been done them. Park and others have shown by abundant clinical experience at the New York Contagious department that one adequate dose gives all the benefits that one may expect from antitoxine. The idea is wrong that one may give a small dose and repeat it in a day or so with as good results as one sufficiently large early dose. There is no use waiting twelve hours or any length of time for a needed second dose. If another dose is needed it should be given at once even if only an hour has elapsed since the preceding one. But better than this is to give enough at the first and only administration. An abundance of antitoxine neutralizes not only the toxine in the body at the time, but the diminishing amounts of it manufactured subsequently; one thousand times as much antitoxine is administered as is required for the amount of toxine in the body.

It is useless to argue such fine points as whether one should give 2,000, 3,000 or 4,000 units. At the General Hospital and in private practice the writer has seen no reason for ever giving less than 5,000 units except in immunizing.

An adequate working rule then is as follows:

Administer one sufficient dose as early as the case is seen, on the first day of the disease if possible. At this time 5,000 units given intramuscularly is sufficient if the extent of the disease is small, but 10,000 is preferable and almost certainly



make unnecessary a subsequent dose.

It seems only rational to base the amount of antitoxine more or less upon the weight of the child, but from the practical standpoint, it seems to do no harm to give even the smallest child with diphtheria 5,000 units and older children 10,000 on the first day.

In case the patient is not seen until the second day at least 10,000 units should be given intramuscularly and intravenously. The writer refers you to an article by him in the August 14, 1915, Jour. A. M. A. which deals with the technic of intramuscular and intravenous injection. Three to four times as much effect is gotten from these methods of injection as from the ordinary subcutaneous injection. Certainly intramuscular injection is just as easy as subcutaneous, and is three times as efficient. On the third day and thereafter at least 20,000 units should be given at one dose and no more can be expected to do any good at this late date. When a diphtheria patient after several days has begun to vomit and there is suppression of the urine and when the pulse is hard to find, it is our experience, he invariably dies in spite of enormous doses of serum.

#### CONCLUSIONS.

1. The mortality in actual treatment of diphtheria at the present time can be markedly reduced.

2. When one has clinically positive diphtheria to deal with he should go ahead and give an adequate dose of serum without waiting for a culture. It is safer to culture all cases with any kind of patches in the throat. Nasal cultures also are of use as a routine as they may be positive when the throat is negative.

3. Antitoxine in doses of 5,000 and in extensive cases 10,000 should be given during the first twenty-four hours.

4. We believe that 2,000, 3,000 and 4,000 doses are unnecessary and insufficient in a therapeutic way and that doses of 5,000, 10,000, 15,000 and 20,000 should be the routine amount administered, depending on the day and severity of the disease. No harm comes from large doses and one

large dose obviates the necessity in practically all instances for subsequent injections.

—————R—————

#### Tumors of the Bladder.

W. D. MCVICKER, M.D., Wichita, Kan.

The diagnosis of bladder tumors may at times be among the most difficult problems in medicine and surgery; again, it may be so simple as to obtrude itself upon the most unsuspecting novice. However, the internist, general or special surgeon with increasing knowledge and experience, is soon disillusioned, should he favor the latter assumption in most cases.

The conception that classical and typical signs and symptoms favor the early disclosure of their presence is very certainly erroneous. Up to October, 1915, there were 1,702 cases of bladder tumor reported in the literature for the last fifteen years. Of this number, the last series of 369 cases were collected and classified by Gardner as follows: Carcinomata, 178; papillomata, 175; sarcoma, 7; cysts, 4; polyp, 3; fibroma, 1; cystitis cystica, 1. Tumors were present four times as frequently in the male as in the female. The average age being about 50 years. As to the frequency of bladder tumors, some idea may be gained by the fact that the Mayos with the largest clinic in the United States, report only 114 cases observed by them during their many years of successful surgery.

Pathologists have not as yet agreed on the diagnosis of bladder tumors. Contrary opinions seem to prevail. Thus, papillomata are classified as a benign tumor, yet Judd says fifty per cent recur, which should hardly be the case if there was not an element of malignancy in them. Many reports show one part of the tumor benign, another part malignant.

Keyes reports a case of a tumor removed suprapubically and the pathologist's report was carcinoma. A few years later the tumor recurred and the same pathologist reported it to be papilloma. In the face of such evidence, one can have

very little confidence in the microscopic diagnosis. However, Buerger claims that the pathological diagnosis of carcinoma is possible in most cases, basing his views on a series of 113 cases in most of which a satisfactory diagnosis was made. I believe his views are not held by other observers, and until such time as the pathologist can give us more definite opinions, the treatment of all bladder tumors must remain the same, either through deep removal, suprapubically and cauterization of the base, or by the method introduced by Beer in 1910, the use of the high frequency electric current directly to the tumor by means of an insulated wire introduced through the cystoscope, or a combination of the two as frequently used by Keyes. I prefer the former method as having less complications than the latter, the most important being *electric shock*, which often happens; *Neglect*, the patient may not return for his second treatment, especially if he happens to be a highly nervous individual; *Hemorrhage*, the sloughs of burned tissue separate usually about the second or third week, at which time quite a sharp hemorrhage occurs that usually calls for aspiration clots from the bladder.

By the former method the tumor is completely removed at one sitting and your patient absolutely under control and observation, and convalescence is limited to a short time, and if there is any cystitis present, the daily irrigation through the supra-pubic wound soon clears it up. I may say in passing that practically all these cases have a cystitis due to retention of the blood clots, haematuria being a constant symptom. Thus, one is able, by the operative method to perform double service. There has been a number of deaths reported from the use of the dessication or high frequency method of treating bladder tumors, the fatality being attributed to infection. However, I think the high frequency method is much better adapted to recurrences than the open method, for the reason that if one follows his primary operation by systematic cystoscopy, every three or four months for the first year,

then in one year or less we may discover the tumor, while still small and at one treatment be able to destroy them, for only by constant watchfulness may we hope to succeed in the treatment of these neoplasms.

*Recurrences*—The consensus of opinion thus far of all observers seems to be that a very large number of bladder tumors recur, not necessarily at the original site, for a considerable number recur at other points. Beer claims that prospects of recurrence at the original site after three months is practically nil, and his opinion is confirmed by other operators.

Judd, in his report of the 114 cases observed in the Mayo clinic, reports only three benign in the series. Keyes, in his twenty-seven personal cases, reports ten cases apparently cured as verified by cystoscopy after one year or more, and of his whole report of 126 collected cases, twenty-five have been cystoscopically proved free of recurrence at the end of two years. This report I think a very fair average obtained and reported by the majority of the operators. I append the report of a case which I think very typical of bladder tumor, both as to its clinical manifestations and mode of onset.

Male, aged 51 years, on whom I had previously operated for tuberculous effusion of the pleura, and while still convalescent in the hospital, informed me on my morning rounds at the hospital that he had passed blood from his bladder at 4 o'clock that morning and again at 8 o'clock. His urination was painless and unaccompanied by tenesmus, straining or burning. The urinal on examination contained quite a quantity of blood and some few clots. He informed me that the blood seemed to come at the end of the urination, the urine itself being passed free and clean. This on observation, *I found to be the case.*

The bleeding continued, and in hopes that it would clear up, I postponed doing cystoscopy for a week, but in the meantime keeping the patient at rest in bed and ice bag over the bladder. Examination cysto-



scopically was made by Dr. Lyon, and though the blood clots in the bladder hindered somewhat, we were able to locate a tumor of the papilloma variety just above and to the outer side of the right ureteral opening from the base of which blood was seen to be oozing. The left ureteral opening was plainly seen, but the right was not visible. After an interval of four days, during which time the hemorrhage increased and cystitis in a mild degree developed, the patient was again cystoscoped by Dr. Lyon, and I suggested that it be done at the office so that fulguration might be tried if it was thought advisable. By frequent bladder irrigation we had a somewhat clearer field this time, and the tumor appeared about the size of a fifty cent piece and somewhat overlapping the right ureteral opening. Dr. Lyon thought the tumor too large for fulguration, and the patient was prepared for suprapubic cystotomy.

At operation, the bladder wall was found to be of normal thickness, and after introducing deep retractors, both ureteral openings were located and discharging clear urine. The tumor mass was at the location shown by the cystoscope, about one-half inch above and to the outside of the right ureteral opening. The tumor had a cauliflower appearance, with a sessile base. It was nearly round and had the villous appearance, characteristic of this type of tumor; it was very soft and had a tendency to bleed at the slightest touch. The whole tumor mass was clamped off at the base with pedicle forceps and cut away and the base deeply cauterized, every bleeding point gone over carefully with the cautery iron. A small rubber drainage tube was sutured into the bladder opening and the wound closed. The tube came away on the eighth day and the wound was entirely closed by the twelfth day and the patient voiding his urine in the natural way.

Post-operative recovery was uneventful, no blood being passed after the second day. Cystoscopic examination shows complete healing.

The tumor was sectioned and passed on

by three pathologists, and all pronounced it to be benign papilloma. Time alone will show whether or not we have a recurrence.

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### Pharmacologic Superstitions.

H. C. Wood, Jr., Philadelphia (Journal A.M.A., April 8, 1916), says the length of time during which a drug has been employed in medicine furnishes no measure of its usefulness. Remedies whose reputation was sustained unabated for 2,000 years have been thrown away and their names forgotten within fifty years. He mentions the various cures which have been recommended and abandoned, some of them after many years of use, as demonstrating this fact. The conclusions of chemists or physiologists as to the value of a remedy cannot be accepted until the tests have been sufficient to meet all these possible requirements. The effects of certain drugs in relieving symptoms are often most evident, but the question whether they are beneficial in disease cannot be answered so dogmatically. It seems to him fair to conclude that we are only justified in giving credence to claims of therapeutic usefulness when the known action of the drug permits a plausible explanation of its asserted benefits in harmony with the accepted theories of the disease and one supported by sufficient bedside corroboration. When the candidate drug can present no signs of its logic, and only vague and scanty clinical credentials, we are certainly justified in regarding its claims with suspicion. He reviews some traditional remedies by the standards set down by him, and condemns them, as a result, to the limbo of all forgotten superstitions. Among these are compound syrup of hypophosphites, and he gives apparently very good reasons for his unfavorable opinions, as well as those on lithia, sarsaparilla, Basham's mixture, ferric chlorid, opium as a local remedy and aromatic spirits of ammonia, which are the others specially mentioned.

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**THE JOURNAL***of The***Kansas Medical Society****W. E. McVEY, M.D. - - - - Editor**

ASSOCIATE EDITORS—C. W. REYNOLDS, C. C. GODDARD, HUGH B. CAFFEY, O. P. DAVIS, W. E. CURRIE, ARCH D. JONES, K. P. MASON, H. N. MOSES, C. S. KENNEY, D. R. STONER, J. A. DILLON, W. F. FEE.

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**The Semi-Centennial.**

The meeting of the State Society in Topeka, May 3, 4 and 5, has plainly demonstrated the wisdom of the plan discussed in the pages of the Journal at various times. The attendance at this meeting was the largest on record for this society. Those in attendance were enthusiastic in their praise of the meeting, and a feeling of good fellowship generally prevailed. The Council decided that a similar program would be carried out at the next meeting, except that at the next meeting at least six men of national reputation will be secured for the program.

Those who attended the illustrated lecture by Dr. Albee were fully repaid for all the expense and trouble and loss of time in coming to Topeka. The moving picture films of his bone grafting operations were simply wonderful. Every step and every detail of the operations were in plain view of the audience. In making the pictures every precaution was taken against obscuring the field of operation. Nothing of the operator or his assistants appeared in the picture except their hands. The picture demonstrated the wide range of application of bone grafts and also demonstrated the importance of proper instruments for simplifying and facilitating the

operations. The Iris theater, in which the lecture was held, was completely filled.

The illustrated lectures by Dr. Crile and Dr. Bransford Lewis were held in the auditorium of the Elks' building, and this hall was filled to its capacity. These lectures were illustrated with lantern slides, and occupied most of the afternoon. A more attentive and more appreciative audience could not have been found.

While the special program of Thursday seemed to be the greatest attraction, there was an unusually good attendance at the sessions of the first and last days, and the papers on the regular program were well received and thoroughly discussed.

As this was the semi-centennial meeting, it was most appropriate that the president should review the early history of the Society in his address. It was extremely fortunate that President Walker had had a personal acquaintance with many of the charter members and several of the early officers of the organization. Many very interesting facts in connection with the early history of medicine in Kansas were presented. The editor of the Journal was instructed by the House of Delegates to furnish each member with a reprint of the president's address.

The entertainment features of this session were not as elaborate as has been the custom heretofore, but those who were in attendance seemed to be very well pleased. On Wednesday evening a show was given by the Snyder and Doncyson minstrels. While this is a local and amateur organization, it contains a number of excellent musicians. The show seemed to be thoroughly appreciated and afforded, at least, an opportunity for relaxation. After the public meeting on Thursday evening the visiting members were given a luncheon at the Elks' Club rooms. It was a very informal affair, where the members were permitted to smoke and fraternize and amuse themselves in any way they pleased. A little music and some vaudeville stunts helped to pass the time.

The Committee on Arrangements met

with some very serious handicaps in their preparations for this meeting. Early in the year an application was made for the use of the State Memorial Hall. The members of the committee who made the application were very careful to explain the nature of the program, the requirements for exhibitors, etc., and no objections were offered. In fact, the committee was assured that every possible aid would be given, and as much corridor space could be used as would be required. After spaces had been allotted to the various exhibitors and other arrangements practically completed, notice was given that exhibits would not be admitted and that lanterns and picture machines could not be used in the hall.

While this beautiful hall was built by the state for the use of all state organizations, it seems that it is entirely under the control of the G. A. R. It seems that the official representative of the G. A. R. who gave permission for the use of the hall was unable to withstand the objections raised by others of the organization. At any rate, he placed such restrictions upon the committee that it was necessary to find another meeting place. It was at this most critical period of this dilemma that the Elks came forward with a tender of their building. This whole building was practically turned over to the Society for four days. The Elks were simply turned out of house and home, but they took it kindly and gave every assistance in their power to make this meeting the success it was.

It was not until Saturday before the meeting that the committee had any intimation that a moving picture exhibit was to be given by Dr. Albee. It was short notice, but through the kindness of Mr. Montgomery, of the Iris theater, with machine and operator, was secured for Thursday morning. This was most fortunate, for the screen at the Iris is one of the most perfect in the state, and the machine an excellent new one. This partially accounted for the clearness and steadiness of the pictures. They could not have been more perfectly shown.

We would like to say, in this connection, that two of the most active and efficient members of the committee were not included in the list which appeared in the program. Drs. L. V. Sams and E. G. Brown were indispensable, and deserve much of the credit for the successful outcome of the meeting.

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### **The Official Badge.**

Three years ago a committee was appointed to prepare and submit to the House of Delegates a design for a permanent badge for members of the Kansas Medical Society. The report of this committee was made this year, and in the form of a lapel button for each member of the Society in attendance. The design was made by Dr. O. P. Davis, and consists of a gold staff and serpent on a green cross outlined with gold and on a white background in which is stamped the name of the Society in gold letters. These buttons were presented as souvenirs by the Shawnee County Medical Society, and are intended for permanent use.

At the meeting of the House of Delegates on the last day of the session this design was adopted as the official badge of membership.

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### **Anti-Narcotic Laws.**

While our anti-narcotic laws are sometimes inconvenient and troublesome, to the honest, legitimate practitioner they are inadequate to control the narcotic evil in states where men who have had no instruction in the nature and uses of drugs are permitted to administer them without restriction. Since the government has issued narcotic licenses to osteopaths in this state the people must suffer if they misuse the privilege thus conferred. Although the osteopathic license law was never intended to permit them to use drugs, the restricting clause, by design or oversight, has been eliminated. The following, which has been clipped from the Hutchinson Gazette of April 4, tells one of many similar stories which might be related:



"Kansas county and state officials are powerless to act in the 'dope' case in which Mrs. Monta Meals, of 213 Avenue B east, is said to have acquired the habit through the application of morphine in treatments by a local osteopath. Local officials stated last night that there was no state law covering such a case except in the sale of the drug and that in this case it would be necessary to prove that the osteopath did not act in good faith in administering the drug before a conviction could be secured on that ground.

"Mrs. Meals was taken to a Kansas City sanitarium last night for treatment in an attempt to kill the appetite which she has acquired through months of treatment in which the drug is alleged to have been freely used.

"When the case was brought to the attention of local officials an investigation of the statutes revealed the fact that they were without authority to act. The federal authorities were then called in, the officials coming here to secure evidence in the case for prosecution under the Harrison act.

"From the evidence obtained they were not convinced that they either had any jurisdiction in the case and have checked it up to higher authorities for further investigation before any action is taken."

—R—

At every annual meeting of the State Society there is the same old problem of fitting the things to be done into the time allotted. The House of Delegates very seldom meets on time, very seldom gets through with the business in the time allotted, and if the program is continued during the meeting of the House of Delegates the authors of papers are disappointed in their audience. The method of electing officers is too cumbersome and too time consuming. If the nominations must be made by secret ballot, we would like to suggest that a blanket ballot be prepared by the secretary and supplied to each delegate when he registers and qualifies. These ballots should be prepared and handed to the secretary when

the meeting is called for the election of officers. Tellers and judges could then be appointed to count the ballots while the delegates attend to other business. In this way all the nominations could be made by the same ballot. The election could also be conducted in the same way.

Another time consuming procedure of the House of Delegates is reading the reports of Councillors. If these were carefully prepared and published in the April number of the Journal every delegate and every member of the Society would have an opportunity to read them and more thoughtfully consider them.

—R—

A bill has recently been introduced in the United States Senate which, if passed, will require the president of the A.M.A. to resign his position, and will prohibit all medical officers of the government from belonging to medical societies. The man who introduced this bill is said to be an advocate of Christian Science, and his supporters are mostly of the same faith. Their contention is that the A.M.A. is the representative organization of a medical belief or a school of practice.

The public is still under the impression that the practice of medicine is a sort of religion in which there are various denominations or faiths, and that each practitioner must be allied with one of these. It is certainly time to eliminate the idea of sectarian medicine from the minds of those who belong to the A.M.A. or any of its affiliated societies. Every applicant for membership signs a pledge not to support any exclusive dogma or school, but we still persist in calling ourselves "Regulars." As long as we continue to so designate ourselves we must expect the public to recognize the term as signifying a school of practice. The name means nothing and should be discarded. The title of Doctor of Medicine is comprehensive enough for this age of medical progress.

—R—

The editor of the Topeka Capital saw one of the badges somewhere. He said the



design was some kind of a cutting instrument cutting into something, he could not tell what, but he supposed it was intended to represent split fees. We are not at all surprised that he should have failed to recognize the cross, but newspaper men are usually quite familiar with the contour and various poses of the serpent. A doctor who failed to get a more intelligent conception of things observed would have a hard time getting the people to think he was wise.

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The death of Dr. J. E. Hunt, of Kansas City, Mo., which occurred last month, was a shock to the profession of Kansas, who had come to know him in connection with the department of Pediatrics in the Clinical School. Although a comparatively young man, Dr. Hunt had established an enviable reputation in his specialty.

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Report has been received of the death, in the last week of April, of Dr. H. H. Miller, who has practiced medicine in Ross-ville for many years.

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It may be a matter of interest to alumni of the Kansas Medical College to know that sixty-seven of their number were registered at the semi-centennial meeting of the State Society.

## SOCIETY NOTES.

### SOUTHEAST KANSAS SOCIETY.

The semi-annual meeting of the Southeast Kansas Medical Society was held in the library hall, Iola, Kan., Wednesday, April 12. Beginning promptly at 2 p. m. the following program was presented

1. The Function of the Suprarenal Glands, Dr. J. S. Stutcliff, Iola, Kan.
2. Recognition and Treatment of Frontal Sinus Headache, Dr. H. B. Caffey, Pittsburg, Kan.
3. Diphtheria, Dr. W. L. Hopper, Fort Scott, Kan.
4. Hernia, illustrated, Dr. L. D. Johnson, Chanute, Kan.
5. Heredity, Dr. E. E. Liggett, Oswego,

Kansas.

6. Paper, Dr. J. C. Cornell, Parsons, Kan.
7. Clinical and Experimental Observations in Hemorrhagic Diathesis, Dr. W. W. Duke, Kansas City, Mo.
8. Deductive Methods as Aids to Neurological Diagnosis, Dr. P. B. Newcomb, Osawatomie, Kan.
9. The Eye, Dr. B. I. Johnson, Chanute, Kansas.

The society adjourned to the Y. M. C. A. where a banquet was served. From the banquet all the visiting members proceeded to the Grand theater to see the play, "Everywoman," as guests of the Allen County Medical Society.

T. D. BLASDEL, Secretary.

### MORRIS COUNTY SOCIETY.

The Morris County Medical Society met in Council Grove on May 13. The society was entertained with an illustrated lecture on the Pathology of Various Diseases of the Nervous System, by Dr. Grover Burnett.

### WYANDOTTE COUNTY SOCIETY.

The regular meeting of the Wyandotte County Society was held in the Mercantile Club rooms April 18. The following program was prepared: Hodgkin's Disease with Report of Case by Dr. King; Case Report by Dr. Mabie.

### RICE COUNTY MEDICAL SOCIETY.

The annual meeting of the Rice County Medical Society was held in the office of Dr. Fisher, at Lyons, Kan., January 27, 1916. Election of officers for the year 1916 resulted as follows: President, Dr. J. S. McBride; vice president, Dr. M. Trueheart; secretary-treasurer, Dr. J. M. Little; censor, Dr. C. E. Fisher; delegate for two years, Dr. Wallace; to read paper at State Society, Dr. F. E. Wallace.

### DECATUR-NORTON COUNTY SOCIETY.

The following program was announced for the meeting of this society on Wednesday, April 26, at Norton:  
10:00 a. m.—Automobile drive to State

Sanatorium and Lathrop Hospital.

12:30—Luncheon at Bowers' Tavern, guests local physicians.

2:00—Address, F. H. Smith, Goodland; "The Common Injuries of the Eye," C. W. Cole, Norton; "Appendicitis," F. E. Gaither, Lenora; "Gastroptosis," W. C. Lathrop, Norton; "School Reports," I. L. Parker, Hill City; "Case Reports," F. D. Kennedy, Norton; Round Table, H. O. Hardesty, Jennings; "Home Made Vaccines," H. M. Moses, Salina.

#### SEVENTH DISTRICT SOCIETY.

The Medical Society of the Seventh District held the annual spring meeting April 28. A good attendance and a good meeting.

The following officers were elected: President, Dr. H. E. Haskins, Kingman, Kan.; first vice president, Dr. F. E. Wallace, Chase, Kan.; second vice president, Dr. M. Trueheart, Sterling, Kan.; secretary-treasurer, Dr. W. F. Schoor, Hutchinson, Kan., re-elected; censor, Dr. W. E. Currie, Sterling, Kan., re-elected. The next meeting will be October 26, 1916, at Hutchinson, Kan. We have a few excellent papers that were read at this meeting that I will be pleased to mail you if you desire to publish them in the Journal.

Yours very truly,  
W. F. SCHOOR, Secretary.

### BOOKS.

The Medical Clinics of Chicago—Volume 1 No. V  
(March, 1916).

The Medical Clinics of Chicago. Volume I, No. V (March, 1916). Octavo of 220 pages, 67 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8.00; cloth, \$12.00.

Number 5 of Vol. I of The Medical Clinics of Chicago has been received. Among the interesting reports appearing in this number we note: Roentgenologic Aspects of Intestinal Stasis by Dr. Jas. T. Case; Bronchiectasis with Cardiac De-compensation, Acromegaly without Subjective Symptoms, Acute Generalized Tubercular Adenitis, Gangrene of Lung—

Drainage and Recovery, Carcinoma of Stomach, by Dr. Chas. S. Williamson; Acute Nephritis Following Acute Tonsillitis; Cellulitis of the Chest, by Dr. Robert B. Preble; Hysteria in a Strong Man, Traumatism of the Cauda Equina, Tumors of the Spinal Cord, by Dr. Ralph C. Ham-mill; Typhoid Fever Resembling Pneumonia, Banti's Disease, by Dr. Frederick Tice; Congenital Syphilis, by Isaac A. Abt; Mitral Insufficiency and Stenosis, Primary Sarcoma of Fibula with Metastasis, by Chas. L. Mix, M.D.

The Clinics of John B. Murphy, M.D.—Volume V, No. II (April, 1916).

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume V, No. II (April, 1916). Octavo of 176 pages, 32 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8.00; cloth, \$12.00.

In the April number of the Clinics, Dr. Murphy gives a very interesting talk on the Surgery of Tendons and Tendon-Sheaths. There are some very interesting clinics, including the following: Retention Cyst of Lip-Ablation; Torticollis; Cervical Rib—Excision; Hemorrhagic Dural Cyst—Ablation; Plegmon of Spinal Cord; Fracture-Luxation of Thoracicolumbar Spine; Traumatic Synovitis of Shoulder; Disjunction of Lower Epiphysis of Humerus. A series of cases of fractures, contractions and deformities of hand and arm with operative procedures. A series of similar cases involving the leg. The Clinics are very finely illustrated.

The Endemic Diseases of the Southern States.

The Endemic Diseases of the Southern States. By William H. Deadrick, M.D., and Loyd Thompson, M.D., of Hot Springs, Arkansas. Octavo volume of 546 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.00 net; half Morocco, \$6.50 net.

In the preface the authors say: "The inception of this book was due to the fact that there is no work in existence dealing solely with the endemic diseases of the Southern states." While the diseases that are discussed in this book are endemic in the South, at least two of them, malaria and pellagra, are now rather widely disseminated throughout the United States.

The subjects of general discussion are as follows: Malaria; Blackwater Fever; Pellagra; Amebic Dysentery; Hook-worm Disease; Other Intestinal Parasites. Over two hundred pages are devoted to the discussion of malaria, and there is included a history of the disease, its geographical distribution, its etiology, pathologic anatomy, clinical history, diagnosis, prophylaxis and treatment. All the various theories, as well as the investigations which have been made in support of the theories of the cause of pellagra are considered. All the possible factors in the etiology of the disease are discussed. All of the subjects are given thorough consideration.

#### The Basis of Symptoms.

The Principles of Clinical Pathology. By Dr. Rudolph Krehl, Ordinary Professor and Director of the Medical Clinic of Heidelberg. Authorized translation from the seventh German edition by Arthur Frederick Beifeld, Ph.B., M.D., Instructor in Medicine, Northwestern University Medical School, Chicago, with an introduction by A. W. Hewlett, M.D., Professor of Internal Medicine, University of Michigan, Ann Arbor. Third American edition. Published by J. B. Lippincott Co., Philadelphia and London. Price, \$5.00.

This book of Krehl's needs no commendation. It has passed through seven editions in Germany, has been translated into several languages, and this third American edition will find a place in the library of every careful student of medicine.

A few quotations from the author's introduction will better serve in explaining the purpose and scope of the work than the reviewer's general comments. "The different chapters of this volume are concerned with a consideration of the behavior of correlated organs under the influence of a particular disturbance of function. Intended as supplementary to texts on physiology and special pathologic anatomy, the attempt is not made to cover what properly belongs to those fields.

"What we have contributed to normal and pathological physiology in the effort to understand the life of the organs consists chiefly in the employment of more exact methods and in the recourse to physics and chemistry. How can the circulation be regarded other than from a mechanical

point of view, or the digestion other than from the chemical or physico-chemical?

"In my opinion, then, there is but one correct way to study the majority of morbid processes and the functional disorders of the organs which produce them, and that is by a comprehensive comparison of physical and chemical anomalies in disease with conditions as we know them in health."

#### International Clinics—Volume I of the Twenty-six Series.

Quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia, with the collaboration of Chas. H. Mayo, M.D. Published by J. B. Lippincott Co., Philadelphia and London.

This volume of the International Clinics is fairly representative of the work as a whole. Those who are familiar with the Clinics know what to expect—some very excellent articles on a variety of subjects are always to be found. Among those in this volume we note the following: Chorea—Including a New Treatment by Drs. E. E. and W. H. Mayer; Drug Therapy in Cardiovascular Diseases by Dr. Thos. E. Satterthwaite; The Early Diagnosis of Gastric Cancer by Julius Friedenwald, M.D.; Prolapse of the Genital Organs in Women by Dr. Henry T. Byford; The Non-Operative Treatment of Fractures of Long Bones by Dr. John B. Roberts.

#### The Practical Medicine Series.

Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School.

##### Volume 1, General Medicine.

Edited by Frank Billings, M. S., M.D., head of the Medical Department and Dean of the Faculty of Rush Medical College.

This volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume being complete on the subject of which it treats for the year prior to its publication. Price of this volume, \$1.50. Price of the series of ten volumes, \$10. Published by The Year Book Publishers, 327 S. La Salle Street Chicago.



## MISCELLANEOUS.

### Dusty Occupations.

V. C. Baker, New York (Journal A.M. A., May 6, 1916), has investigated the influence of dusty occupations in the production of disease among the patients examined at the Cornell University College dispensary. The diseases investigated were those observed in furriers, of whom there were sixty-nine applying for treatment, mostly natives of Russia and Austria-Hungary. There were few hatters and they are not considered in the statistics, though they are liable to injury from dust and from the use of mercuric nitrate. Most of the workers were young adults, only twelve being over 40 years old. The respiratory tract is most frequently involved. There were nine patients with pulmonary tuberculosis, twelve with chronic bronchitis, ten with emphysema, and two with bronchial asthma. Of the latter two, one attributed his trouble to the anilin dyes used. The occupation of barber is not usually considered a dusty one, and but 110 were examined. There were forty-five patients with respiratory disease and thirty-one with alimentary tract disorders. The dust cannot be blamed for this, but the occupation causes fatigue from long standing on the feet and thus affects normal alimentary processes. One hundred and thirty bakers were examined. The occupation has long been considered insanitary, but has been much improved by regulation. The chief hazards are exposure to excessive heat and flour dust. Fifty-four showed signs of respiratory disease, and thirty-one patients alimentary diseases. Seventeen had gastric disturbances, probably due to overindulgence in their own wares, and there was also present the more or less constant use of alcohol. In the manufacture of tobacco, cigars and cigarets a certain amount of dust is produced—plenty in the work of the strippers and tobacco handlers. In the manufacture of cigars there are few moist leaves used, and the atmosphere contains fine particles of tobacco with its nicotine

and volatile oil and other extraneous matters. Ninety-two of the workers examined were cigar makers, nineteen cigaret-makers, and fourteen tobacco handlers. There were thirty-eight patients with respiratory disease, thirty with alimentary complaints, chiefly chronic gastritis and constipation, and twenty-five with nervous diseases, including headaches and neurasthenia. There was one patient with acute nicotine poisoning and one with tachycardia. Nineteen marble workers were examined, eight suffering from respiratory diseases. Most of the stone cutting is done outdoors in large airy sheds, and pneumatic tools are used to a considerable extent nowadays. These tools stir up much dust, which is increased by the use of air pressure to keep the cutting surface clear. Thirty-seven cases were encountered, in twelve of which the patients suffered from respiratory diseases. Although only one case of chalcosis was recorded, a greater number would probably have been noted if other factors were studied as closely as physical signs. Thirty-six plasterers were examined, and the respiratory tracts were found largely involved. Admitting dust to be the important causative factor, Baker recommends the following methods of meeting it: In the fur trade one of the worst processes is beating. This should be done in a separate room with proper means of removing the dust from the atmosphere. It should not be allowed to accumulate. Sweeping should be done after hours with vacuum cleaner or dampened floors. Respirators should be worn wherever dust is prevalent. Among the barbers, hairs should not be allowed to remain on the floors, and ventilating fans and currents should be directed so as not to disturb them. Special care should be observed in bakeries against raising dust, and where there is dust, proper protectors to the nose and mouth should be used. The tobacco workers should not allow scrap to accumulate, and the already mentioned methods of ventilating and sweeping should be employed. In marble work, stone cutting and plastering, the fine ma-

terial should be removed as soon as possible, and procedures involving dust production should be curtailed as much as possible. Respirators are called for where dust is unavoidable. Other general cautions in the dusty trades are instruction of the workers as to the risk, frequent physical examinations, fresh air and cleanliness in the home and the encouragement of exercise. The workroom should not be overcrowded or littered, and light and ventilation should be properly provided for. The high percentage of respiratory diseases in certain trades is due to the exposure to dust which prepares the lungs to receive infection.

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R

### Urine Retention.

A. H. Curtis, Chicago (Journal A.M.A., May 6, 1916), calls attention to the danger of infection from retained bladder urine, and discusses some conditions in which retention is frequently encountered. Stasis of urine above the bladder level is not considered. The common belief that catheterization of the urethra is a chief cause of urinary tract infections, in spite of the employment of the utmost possible aseptic precautions, is disputed by him, as it has not been, according to his observations. When cystitis develops after therapeutic catheterization, it occurs in spite of the utmost care. On the contrary, when catheterization is performed for other conditions than relief of retained urine, as in cystoscopic examinations, subsequent infection is a rarity. Finally, both in disease and in experimental work, when virulent bacteria pass through the normal bladder they do not tend to cause change in the mucous membrane unless predisposing conditions favor it. The most important factor, he believes, is retention of contaminated residual urine. During the past year Curtis has made observations on the amount of residual urine in women, and these show that under normal conditions the bladder empties itself completely. He has seen no case of catheter cystitis in the absence of residual urine. Mechanical conditions, as in the upward displacement of

the bladder in pregnancy, are not to be overlooked. The urinary retention threatens ascending infection to the pelvis of the kidneys. His conclusions are as follows: 1. Cystitis seldom results from cleanly and careful catheterization of a healthy, physiologically normal bladder. 2. Contamination of residual urine accounts for many otherwise inexplicable cases of urinary tract infection in women. 3. Residual vesical urine probably plays a considerable part in the development of the pyelitis of pregnancy. 4. Postoperative and postpartum accumulations of residual urine greatly increase the dangers of urinary tract infections.

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R

### Prognosis of Sterility.

Edward Reynolds, Boston (Journal A.M.A., October 2, 1915), classifies sterilities according to their causes: those due to absence or defect of the ovum; those due to destructive secretions in the genital tract and those due to absence or inferior quality of the spermatozoa. In each of these classes we find organic and functional cases; this makes six classes to begin with, and most of these will require further subdivision. We know nothing of the chemistry of the reproductive organs and can only draw a few conclusions from observation and experiments on animals. It seems to be an established fact that fertility is diminished by undue obesity and by overwork, and there is also some reason to think that conditions of life which produce marked nervous excitement decrease fertility. We have, however, no knowledge of the mechanism by which such alterations of condition produce relative or complete sterility in animals. We know a little more about this point in the human male than in the female, on account of the ease with which the spermatozoa can be directly inspected. We have direct evidence that excessive mental work sometimes causes disappearance of the spermatozoa, and probable clinical evidence that alcoholic excess and possibly excessive use of tobacco injure the vitality of the spermatozoa. We have no facts in regard to any



like effects in the female and can only surmise that they may occur. In spite, however, of the unsatisfactory state of our scientific knowledge, Reynolds says it is possible to obtain very satisfactory practical results in the prognosis of sterility in individual cases by the assumption of the following working hypotheses: "1. When the spermatozoa are abundant in number, normal in form and appearance, furnished with long cilia and capable of rapid movement through the semen the male is satisfactorily fertile. 2. When normal spermatozoa are killed or lose vitality overrapidly in the secretions of the individual woman, the chemicophysiologic character of her secretions furnishes an effective cause of sterility. 3. The alterations in a secretion which make it fatal to the spermatozoon may be localized in the vagina, in the cervix, in the body of the uterus, or in one or both tubes; and any one of these alterations may exist with normal secretions above it; but an alteration in the secreting surface in any of these localities usually vitiates all the secretions below it, probably by their necessary admixture. 4. When the spermatozoa are observed to penetrate without apparent loss of vitality to the fundus of the uterus and to survive there for a normal length of time, deficient quality of the ova may be considered the probable cause of the sterility." One must remember that a couple of persons are concerned and that the conditions in both are to be studied. A carefully taken history is essential, not confined to the sterility alone, but going into the fullest detail as to the past health of the patients, and should include with the physical examinations a special study of the nutrition and habits, sexual practices, etc. The next step usually is a careful examination of the genital tract of the woman, step by step, observing the minor abnormalities that may be without importance to general health, as they may reveal the cause of sterility. Reynolds says that in most cases the next step should be the method of examination devised by Dr. Max Huhner of New York, the microscopic examination of

the spermatozoa in situ in the genitals of the woman, which is described in detail. It must not be relied on too much, lest it lead to a too mechanical view of the problem of sterility. It requires special skill and familiarity with microscopic appearances, is hardly adapted for empiric experimental use by the general practitioner, nor is it safe unless carried out with the most complete asepsis. Reynolds gives details as to the prognostic interpretation of the various conditions that may be found and accounts for the proverbial ill-success of the treatment of sterility by his belief that physicians do not sufficiently educate themselves on the subject, the examination of both partners is too frequently overlooked and the minor conditions which determine sterility do not receive due attention. Treatment is too often directed solely to abnormalities and conditions affecting health and not to the real cause. When physicians more generally attend to these points the prognosis of sterility will become more satisfactory.

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#### Gastric Ulcer.

A. O. Wilensky, and S. H. Geist, New York (Journal A.M.A., April 29, 1916), report experimental studies on the production of chronic gastric ulcer in casts after first studying the healing of surgical injuries in a number of the animals. They found that the surgical lesions healed completely in from one to two weeks and the contraction of the stomach wall tended to make the defect smaller. In their experimental production of gastric ulcer the abdomen was opened in the middle line, the stomach pulled out and an incision into it made parallel to and near the major curvature so as to enable one to evert the mucous membrane along the lesser curvature. The defects were made by excising tissue of the stomach wall down to and including part of the muscularis and measured from 1 to 2 cm. in diameter. The bacteria used were injected into the tissue layers and were obtained from cultures of human gastric ulcer excised in operations. The animals were returned to cages and



fed much as usual and ate freely in from twenty to forty-eight hours, not losing weight appreciably. The stomachs were inspected at various periods afterward and it was found that the surgical defects healed as promptly in the injected animals as in the controls. Their experiments, they say, demonstrate that the presence of organisms (streptococci), taken from human gastric ulcers has no effect on producing in cats defects with characteristics of the chronic indurated ulcer of man or in retarding the healing of the injected lesions.

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### **American First Aid Conference.**

It has been suggested that members of the American First Aid Conference, the Executive Committee, the Board of Standardization and the various national and state first aid committees, and all others interested in the First Aid Survey, meet in Detroit the day before the meeting of the American Medical Association.

Please answer on postal card whether this meets with your approval and whether you can be present. Please sign full name and address.

If you have not answered the five questions, please do so.

If you are not a member of the state first aid committee, please offer your aid in the survey. If your state has no first aid committee, communicate with the president of your State Medical Association and urge him to appoint one and send me the names of the members. There are now 650 names on the index of those interested in the first aid movement.

The secretary feels that he should turn the work of this office over to some one more identified with accident surgery and it has been suggested that a railroad chief surgeon living in Chicago be selected for permanent secretary of the American First Aid Conference. Chicago has more chief surgeons than any other city in the country and, for this reason, the secretary would have many helpers in close association.

JOSEPH C. BLOODGOOD,

Secretary.

### **Little Damage to the Abbott Laboratories**

A small fire with explosion of gases occurred April 21 on the top floor of one of the buildings of the Abbott laboratories. Newspaper reports of the extent and character of this accident were grossly exaggerated. The damage was very small, consisting mainly of broken window panes and cracking of temporary partitions. The plant and machinery were injured but slightly, and the entire force went to work the next morning as usual. The Abbott Laboratories have issued a statement positively denying the newspaper reports that this firm is or has been engaged in the manufacture of ammunition or explosives.

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### **New and Nonofficial Remedies.**

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Styracol Tablets, 5 grains.—Each tablet contains 5 grains styracol. Merck & Co., New York.

Tannalbin Tablets, 5 grains.—Each tablet contains 5 grains tannalbin. Merck & Co., New York.

Stanolind Liquid Paraffin.—A non-proprietary brand of liquid petrolatum, complying with the standards of the U.S.P., 8th ed., and made from American petroleum. Standard Oil Company of Indiana, Chicago (Jour. A.M.A., April 1, 1916, p. 1027).

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### **Propaganda for Reform.**

Diarsenol.—Dr. E. H. Martin, Hot Springs, Ark., reports that, after giving several hundred doses of Diarsenol without any bad effects whatever, he had two cases in which nausea, vomiting and symptoms of apparent collapse such as have been previously reported by another writer. He found on investigation that the specimens which in his hands gave untoward results as well as those previ-

ously reported on and two further accidents were all due to a product bearing the same lot number (Jour. A.M.A., April 8, 1916, p. 1155).

**Prescribing of Narcotics.**—The Harrison Antinarcotic law exempts from its operations ready-made mixtures containing specified small quantities of narcotics, but requires physicians' prescriptions containing small amounts of narcotics to be registered. The law should be made consistent by requiring the registration of all prescriptions containing narcotics in any amount. The inconsistency in the law should be removed by prohibiting absolutely the sale, except on a physician's prescription, of preparations containing narcotics in any proportion. The continued uses of small doses of a narcotic drug is just as capable of establishing the habit as is the use of larger doses (Jour. A.M.A., April 8, 1916, p. 1156).

**Piperazing, Lysidin, Lithium Carbonate, Sodium Bicarbonate and Sodium Citrate as Uric Acid Solvents.** H. D. Haskins has studied the uric acid solvent power of urine of persons taking the various substances classed as uric acid solvents. The investigation led to the following conclusions: 1. Piperazin can cause the urine to dissolve more uric acid than it would without the drug, and this effect is most marked if sodium citrate or bicarbonate be also given and if diuresis be avoided. 2. Lysidin can act as a uric acid solvent but is not a practical therapeutic agent because of the large doses required. 3. Lithium carbonate is a uric acid solvent if large enough doses are used, but is unsafe and possesses no advantage over sodium citrate or bicarbonate. 4. Sodium citrate and bicarbonate are reliable and satisfactory uric acid dissolving agents when given in such dosage as to keep the urine alkaline (The Archives of Internal Medicine, March 15, 1916, p. 405).

**Emetic Action of Strophanthus not due to Oil.**—Hatcher and Eggleston have shown that the digitalis bodies produce nausea and vomiting through action on the medulla and that the direct action on the

mucous membrane of the stomach is unimportant. They demonstrated that the fixed oil (fat) of digitalis produced no action and conclude therefore that attempts to void the emetic action of digitalis by removal of oil from digitalis preparations is of no avail. Similarly Hatcher has recently determined that the oil contained in strophanthus is not the cause of the nausea sometimes produced by this drug. While removal of the oil renders tincture of strophanthus more "elegant" pharmaceutically, such removal is of no therapeutic importance (Jour. A.M.A., April 15, 1916, p. 1199).

**A Much Needed Pharmacologic Investigation.**—J. D. Pilcher, University of Nebraska College of Medicine, has investigated the action on the uterus of the guinea pig of a number of drugs which are widely used as ingredients of proprietary "female remedies," and which so far have been little, or not at all, studied. Blue cohosh (*Caulophyllum thalictroides*) showed a variable tonic effect. Pulsatilla (*Anemone pulsatilla* or *Pulsatilla pratensis*), unicorn root (*Aletris farinosa*), figwort (*Scrophularia marylandica*), valerian (*Valeriana officinalis*) and skullcap (*Scutellaria lateriflora*) were more or less depressant. The following drugs gave negative results: Cramp bark (*Viburnum opulus*), black haw (*Viburnum prunifolium*), swamp maple (*Acer spicatum*), false unicorn (*Chamælririum luteum* or *Helonias dioica*), liferoot (*Senecio aureus*), wild yam (*Dioscorea villosa*), motherwort (*Leonurus cardiaca*), passion flower (*Passiflora incarnata*) and squaw vine (*Mitchella repens*). It is to be hoped that Pilcher's work will permit the formation of an opinion as to the therapeutic value of those drugs in which some degree of activity has been found (Jour. A.M.A., April 15, 1916, p. 1205).

**Why Glycerophosphates?**—The glycerophosphates are split up in the intestines into ordinary phosphates and absorbed and utilized, if they are utilized at all. There is no evidence that glycerophosphates have any pharmacologic action to warrant the



belief that they are of use as therapeutic agents. The belief in their value is kept alive by the promotion of certain proprietary mixtures. The glycerophosphates will be continued to be manufactured until physicians refuse to prescribe them. A manufacturer has even substituted glycerophosphates for the potent yellow phosphorus in his elixir of phosphorus, nuxvomica and damiana and, so his chemist reports, physicians continue to prescribe the proprietary the composition of which has been altered (Jour. A.M.A., April 15, 1916, p. 1205).

**Elixir Calcyates Compound.**—Each dessertspoonful of this specialty is said to contain the "equivalent of" Calcyates (calcium and strontium di-salicylate) 5 grains, resin of guaiac  $\frac{1}{2}$  grain, powdered digitalis leaves  $\frac{1}{4}$  grain, powdered squill  $\frac{1}{4}$  grain, extract of colchicum seed  $\frac{1}{4}$  grain, cascarn 1/16 grain, aromatics. One or two dessertspoonfuls are to be taken 3 or 4 times a day. The mixture is to be given in cases of "rheumatism, lumbago, neuralgia, sciatica, etc." If a salicylate is indicated it should be given in sufficient amount in the form of sodium salicylate; the patient should not be given a preparation containing ingredients in the way of guaiac, squill and colchicum which are not needed. Digitalis is rarely indicated in inflammatory rheumatism and it should never be given in a multiple mixture (Jour. A.M.A., April 22, 1916, p. 1307).

**Emetin Hydrochlorid Variable.**—It should not be taken for granted that because a drug bears the name of a definite compound it is true to name and pure, and therefore trustworthy in its action. This fact has recently been demonstrated in regard to emetin hydrochlorid. Two cases in which the administration of emetin hydrochlorid produced symptoms of poisoning (one terminating fatally) at the Johns Hopkins Medical Clinic led to an investigation by R. L. Levy and L. G. Rowntree, in which the emetin hydrochlorid preparations of five pharmaceutical houses were used. This investigation led to the conclusion that the products supplied as

emetin hydrochlorid are variable in composition and in toxicity to a degree which constitutes a serious danger. It behooves physicians to insist on some declaration from the firm supplying emetin hydrochlorid as to its purity and as to the standard employed. Levy and Rowntree emphasize also the fact that emetin hydrochlorid medication itself is not an innocuous procedure. To avoid the toxic effects of emetin, the dosage should be carefully adjusted for each individual and the treatment should be given in courses at intervals of several days or a week. The subcutaneous method of administration is to be preferred (The Archives of Internal Medicine, March 15, 1916, p. 420).

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### A Widely Useful Soap.

**Germicidal Soap, P. D. & Co.** (formula of Dr. Charles T. McClintock), has been called "the soap of a hundred uses." The designation is not inapt. An exceptionally good cleansing agent, this soap is a powerful disinfectant and antiseptic as well. It is a useful lubricant. It is an efficient deodorant. The surgeon, the gynecologist, the obstetrician, the dermatologist, the general practitioner—all have use for the soap.

Germicidal Soap, P. D. & Co., combines the powerful antiseptic mercuric iodide with a soap made from pure vegetable oils. A solution of it containing 1:5000 parts of mercuric iodide destroys pus organisms in less than five minutes.

The soap is neutral, hence not irritating to the skin. It produces a thick lather, which may be allowed to remain on the operating-site for four or five minutes to insure thorough disinfection; on the scalp to rid it of dandruff; on the face in the treatment of acne. Many minor ailments, to which ordinarily little attention is paid, but which nevertheless are annoying to patients, are advantageously treated with this soap. For example, excessive perspiration and excoriation of the skin about the genitalia, the toes, the soles of the feet, are readily controlled by the application of Germicidal Soap lather or solution.



Pendiculus capitis and pubis is readily disposed of by the same means. Abscesses, furuncles, various skin diseases of an infectious nature, are amenable to the application of the soap. An efficient vaginal douche may be prepared by dissolving a piece of Germicidal Soap about an inch square and half an inch thick in hot water. A similar solution may be confidently used to cleanse the hands and instruments in surgical and obstetric operations. The wet soap is an admirable lubricant for specula, sounds, catheters, etc.

The product is supplied in two strengths: Germicidal Soap, 2 per cent (containing 2 per cent of mercuric iodide), in large cakes; Germicidal Soap, Mild, 1 per cent (containing 1 per cent of mercuric iodide), in large cakes and small cakes, the latter in boxes of five. Every well-stocked pharmacy carries Germicidal Soap, P. D. & Co.

#### **Attention, the S. P. C. S.!**

The federal trade commission has sent to Congress a preliminary report on the rise in the price of gasoline. It draws no conclusions but presents masses of statistical information. Among the items noted in the press summary are:

Production of crude oil remained virtually stationary; gasoline contents of crude oil decreased; exports of gasoline increased from 188,000,000 gallons in 1913 to 238,500,000 gallons in 1914 and 284,500,000 gallons in 1915; for its 62 per cent of the gasoline produced the Standard Oil Company charged about 1 cent a gallon less than the "independents" charged for their 38 per cent.

The last item ought to move the Society for the Prevention of Cruelty to Statesmen to do something. Consider the hard lot of the member of Congress with a large constituency of automobile owners. Confronted with angry complaints about the "high price of gas" he is deprived of his old familiar explanation.

He cannot dismiss the complaints with the classic vituperation of the "trust"—the "octopus"—for here is the federal trade commission with its cold-blooded

price tables! Truly the way of the statesman who deals in oratory meant only "for Buncombe County" grows harder every day.

#### **Clinical Facilities of Kansas City Offered to Visiting Physicians.**

The Kansas City Clinical Association is a recently organized body of reputable practitioners who have charge of various hospitals and clinics in Kansas City, and desire to extend the courtesies of the institutions to visiting physicians of repute from surrounding states.

Kansas City has a wealth of clinical material, but no serious effort has been made until now to classify the cases so that visiting physicians could observe operations and study the conditions in which they might be specially interested.

The Clinical Association has been organized for the purpose of enabling visiting physicians to learn at a common source what hospitals, clinics and dispensaries are open to them and the kind of cases under treatment from day to day.

Several new hospitals have recently been constructed in Kansas City, and these, with the splendidly equipped new General Hospital, offer large opportunities for visiting physicians to profit by the great variety of cases.—Edit. Journal Missouri State Med. Assn.

#### **The Toxic Effects of Ketchup.**

Our correspondent says: "The following true story was originated by a real child, and given at the Sunday school convention which I attended last week":

"Once upon a time there was a man, and he liked ketchup so much that he jes' kep' on eatin' it, and eatin' ketchup till one of his arms fell off, but he didn't stop eatin' ketchup, and so one day the other arm fell off. And he jes' kep' on eatin' ketchup and eatin' ketchup till one of his legs fell off, but he jes' didn't stop eatin' ketchup and eatin' ketchup and the other leg fell off. So he kep' on eatin' ketchup and eatin' ketchup till his head fell off. So he ran to the

doctor as fast as he could, and the doctor looked him right in the eye and said, 'I tell you you are eating too much ketsup! I want to tell you if you don't stop eatin' so much ketsup something is going to happen to you.'"

—R—  
**WANTED—FOR SALE—ETC.**

**FOR SALE**—One White Cross Vibrator almost new and one good eye-testing case. Will sell both for half price. A great bargain if you need them. Address "A," care Journal.

**WANTED**—Practice in Kansas town, 500-5,000 population. Describe town, country roads and town improvements; percentage of foreigners, nationalities, kind competition, ages, distances to competing towns, their size and numbers doctors; what have you, how long there (your books must show it); number business houses, price of land, fees. Address "K," Journal Kansas Medical Society.

**WANTED**—Reliable physicians for good location in Central Kansas. Address S. C., care Kansas Medical Journal.

**FOR SALE**—Doctor's office fixtures, small drug stock, with desirable small town location. Cheap. Northeast Kansas. Address "E" Journal Kansas Medical Society.

**FOR SALE**—Static X-Ray machine made by National X-Ray Co., Topeka, Kansas. This machine is new, never having been used. A bargain. Ed. C. Jerman, R. F. No. 1, Topeka, Kan.

**FOR SALE**—A Victor Finsen Light Apparatus. Will sell cheap. Address Journal Kansas Medical Society, Topeka, Kansas.

—R—  
**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.**

Required by the Act of Congress of August 24, 1912, of the Journal of the Kansas Medical Society Published Monthly at Topeka, Kansas, for April, 1916.  
State of Kansas, County of Shawnee, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared W. E. McVey, who, having been duly sworn according to law, de-

poses and says that he is the editor of the Journal of the Kansas Medical Society and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Publisher—W. E. McVey, under direction of the Council of the Kansas Medical Society . . . . . Topeka, Kansas

Editor—W. E. McVey . . . . . Topeka, Kansas

Managing Editor—W. E. McVey . . . . . Topeka, Kansas

Business Manager—W. E. McVey . . . . . Topeka, Kansas

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Kansas Medical Society. Dr. O. D. Walker, Salina, President; Dr. Chas. S. Huffman, Columbus, Kansas, Secretary; Dr. L. H. Mmm, Topeka, Kansas, Treasurer.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only).

W. E. McVEY, Editor.

Sworn to and subscribed before me this — day of March, 1916.

(Seal)

R. A. FERLET.

Notary Public.

(My commission expires February 20, 1920.)

**MODERN EQUIPMENT**



**MODERATE PRICES**

**CHICAGO LABORATORY**

**25 East Washington Street, CHICAGO, ILL.**

# THE JOURNAL

of The

## Kansas Medical Society

Vol. XVI

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No. 6

### PRESIDENT'S ADDRESS.

#### The History of the Kansas Medical Society.

O. D. WALKER, M.D., Salina, Kan.

#### *Members of the Kansas Medical Society:*

In assuming the duties as president of this Society and as I am brought face to face with the dignity and responsibilities of the office, I am, as never before, made conscious of my own limitations. Profoundly grateful for this marked honor, I ask your help and co-operation in unstinted measure, that I may be able to conduct the deliberations of this body in such a way as will advance the interests of this society, of scientific medicine and of humanity at large, and in the end hand over to my worthy successor our cause a little nearer its full fruition.

Important as any meeting of the Kansas Medical Society should be, I am reminded at this time that this is not an ordinary meeting, but is the celebration of our golden jubilee; the semi-centennial meeting of our Society.

At the mid-winter meeting of the Council it was suggested that there be an address upon the history of this Society, and the Council seemed to think that it was right and proper that your president should make this the subject of his paper. I am sure the subject is a happy one for this occasion. I can only say in truth that I would that this mantle might have fallen upon a more gifted writer and readier speaker than I. The task having been laid upon me, I shall do my best.

The act of incorporation of the Kansas Medical Society was passed by both branches of the Territorial Legislature, approved by Governor Medary, and a charter issued on February 10, 1859.

Twenty-nine physicians incorporators assembled in Lawrence in accordance with the provisions of the charter to elect its first board of officers and transact all necessary business. Dr. Alonzo Fuller was the first chairman and Dr. S. C. Harrington secretary. The election of officers resulted in Dr. S. B. Prentiss, president; Dr. J. B. Woodward, secretary; Dr. Albert Newman, corresponding secretary; and Dr. Alonzo Fuller, treasurer. Of the original incorporators of this Society, five were personally known to the writer.

Pursuant to the call of the president, the second meeting of the Society was held at the Eldridge House, Lawrence, February 23, 1860. A Constitution and By-laws were adopted at this meeting, and the Committee on Code of Ethics recommended the adoption of the National Code, which was agreed to. The officers elected at this meeting were Dr. J. P. Root, president; Dr. J. B. Woodward, secretary; and Lawrence was chosen as the next meeting place, the date to be the last Thursday in February, 1861.

A meeting was held at the appointed time but, evidently from the records, little business was done, and no election of officers. The time set for the next meeting was the last Wednesday in January, 1862, at such place as the president would designate.

Instead, however, of meeting the last



Wednesday in January, 1862, it was four years later than this when the society again convened pursuant to the call of the president, in Topeka, January 31, 1866.

From 1861 to 1866—it is scarcely necessary to tell a Kansas audience of the contest that was going on here as well as in the entire nation. For several years prior, these corporators of our Society had stood with the other people of Kansas as a wall of strength against any infringement of their rights, and with a fixed determination to establish here on these broad prairies a government of the people, by the people and for the people, and, while it was their purpose simply to make a state free from any taint of slavery, a fire was kindled which spread beyond state bounds and became a nation-wide conflagration. Kansas started early in this reform movement, and she still continues to show her older sister states that for originality and initiative there is still plenty left.

At this meeting in 1866, a committee was appointed to confer with the regents of the University in regard to the establishment of a Medical Department; however, it was not until 1880 that a preparatory medical year was started and the first class in comparative anatomy was organized.

The writer was a member of this first class, which was composed of three girls and five boys. I well remember when we all signed a petition to the faculty to allow us to dissect a human body, and how it shocked the two lady members of the faculty, and a number more were so indignant at our presumptuousness that it is hard to say what might have happened to us had it not been for our true and steadfast friend, Professor Snow, who, on the quiet, had really encouraged us to get up such a petition.

The organization of the Kansas Medical Society, of which we celebrate the semi-centennial today, was perfected January 31, 1866. The earlier meetings prior to 1866 are not counted in this enumeration; why this is so, the writer has not been able to find out.

Since 1866 the Society has met in annual sessions, no great crisis has interfered with these yearly meetings. It is not necessary for me to take up in detail these subsequent meetings. I take it it is the doings of these early meetings which concerns us upon this occasion.

The history of any great cause is centered around some central prominent man or group of men. The men who were the corporators of our Society in 1859 were men who came to Kansas, not for pecuniary reward, not for a life of ease, but fired with a zeal to make Kansas a free state; they endured and suffered, toiled and worked till they not only saw Kansas a free state, but nation-wide slavery abolished forever. Theirs was the mind and spirit of the Pilgrim and Puritan of New England, the Dutch of New York, the Quaker of Pennsylvania, the English planters of Virginia, the Huguenots and Scotch-Irish of the Carolinas, a mixture of Puritan and Cavalier, the mingling of which produced a Lincoln, the finest flower of the last century, the most typical and greatest of all Americans. It was this same Kansas contest which became the inspired text of Lincoln against the "Little Giant," and undoubtedly defeated him for United States Senator, but two years later elected him President at a time when this nation stood in dire need of a strong, large hearted and patient man.

As these early emigrants gathered together from various points bound for Kansas, Whittier's hymn, "The Kansas Emigrant," became a sort of national hymn to these early colonists. Part of this hymn runs thus

We cross the prairies as of old  
Our fathers crossed the sea,  
To make the West as they the East  
The homestead of the free.

We go to rear a wall of men  
On Freedom's southern line,  
And plant beside the cotton tree  
The rugged northern pine.

We go to plant the common schools  
On distant prairie swells,  
And give the Sabbaths of the wilds  
The music of her bells.

Upbearing like the Ark of God  
 The Bible in our van  
 We go to test the truth of God  
 Against the fraud of man.

Let us consider, for a few minutes, a few of these first corporators. No history of Kansas would be complete that did not give something of the life and work of Doctor Charles Robinson, the first governor of the state. Of him it might be said that he was one with us but not of us. As I knew him he was not in active practice, but a farmer and stock man on a large scale, and so far as I can learn he was the only one of the corporators who accumulated money and left an estate of any amount.

If you want to moralize on this fact, I would suggest if you want to get rich, do not follow the life of a doctor.

No doubt the public life was more to his taste than the prosy, monotonous life of a general practitioner of medicine, for I read in Dr. Cordley's History of Lawrence, he went to California in 1849 with the gold seekers and was a prominent figure in the stirring scenes which characterized the early history of that state. In those turbulent times he was severely wounded, imprisoned for several months, but he and his associates finally won the day and California was saved from the rule of thieves. We honor today Dr. Charles Robinson for the pioneer work he did in Kansas, for his wise counsel and brave heart, in a time that tried men's souls.

Dr. S. B. Prentiss, our first president, I knew very well. His native state was Massachusetts. He practiced medicine in New York for a time, but on account of failing health, moved to Georgia, where he regained his health and did a large practice. On account of his anti-slavery principles he left Georgia and came to Kansas in 1855.

In the history of Lawrence above referred to, the doctor is described as a Southern man with Northern principles; he was an ardent free-state man. He held several positions and did valuable service for the free-state cause; he was a calm, soft spoken man, but full of purpose and

persistence. During the war he served as Medical Purveyor of the State. Important as his public life may have been, zealous as he was for the cause of freedom, it was in the sick room where Doctor Prentiss will be remembered long after his public acts shall have been forgotten. And with propriety it can be said of him as was said of another, "Doctor of the Old School," he did his best for the need of every man, woman and child in this wide straggling district, year in and year out, in the snow, in the heat, in the dark, in the light, without rest, for more than forty years.

Dr. Joseph P. Root was the second president. He was a New Englander who, in his ancestry, could boast of May Flower fame. Dr. Root came to Kansas in 1856 and built the first white man's house in old Wyandotte. The house was brought in sections from Connecticut, and when put together was known as 'Dr. Root's Pill Box.' Dr. Root was an ardent free state man, and beside his great interest in his profession, he held positions of honor in his state and abroad. He was elected to the Territorial Council in 1857, was a prisoner in Leecompton when the Council was under arrest. Was elected first Lieutenant Governor of the state in 1861, served through the Civil War as Division Surgeon of the Second Kansas cavalry; was appointed by General Grant minister to Chili in 1870, received many honors from that government for work done there in handling a bad epidemic of smallpox. In 1880 he was appointed Surgeon General of the state by Governor St. John.

Dr. Alonzo Fuller was the first temporary chairman of this Society. He was a New Englander by birth, came to Lawrence in 1857, was a member of the first board of education, was mayor of Lawrence in 1861, and filled out the unexpired term of Mayor Callomore, who was killed in the Quantrell massacre in 1863.

Dr. Fuller was a very public spirited man, and took great interest in the beautifying of his home town, and today Lawrence, with its beautiful shade trees, parks and good schools, is indebted to Dr. Fuller



for what he contributed in the way of suggestions made when mayor of the town and for his subsequent work. As a physician, he was clear headed, conservative, of fine culture and ripe scholarship, a man who had the confidence of the entire community, and whose valued opinion was sought not only in his chosen profession, but in all matters of public welfare.

Dr. Thomas Lindsay, father of our own Dr. W. S. Lindsay, was another corporator. He came to Kansas in 1857, located on a claim in Anderson County one year before the location of the town site of Garnett, and a few miles from the then flourishing point in Anderson County—Mount Gilead—where Dr. J. B. Blunt, afterwards General Blunt, practiced medicine. Dr. Lindsay was a member of the Territorial Legislature, served through the war as surgeon of the Twelfth Kansas, and was a member of the state Legislature after the war; he was a man of strong convictions, a lover of peace by nature, but unafraid to face danger of any sort when duty called.

Doctor J. B. Blunt, whose name we find among the corporators of our Society, perhaps distinguished himself more in military affairs than in his profession. He served his country with distinction during the Civil War, reaching the rank of Major General. For this more spectacular service he will be remembered rather than for the quiet, unostentatious life of a doctor, no matter how important that life may have been.

It is quite worthy of note that the first governor and lieutenant governor of the state were physicians and corporators of our Society.

Doctor Albert Newman, of Lawrence, another man whom I well remember, was a quiet, dignified man of fine culture and learning. He was the first corresponding secretary of the Society, and was elected president in 1867, and delivered the second annual address. My worthy predecessor made some comments on the first annual address of Dr. Logan as an index of what was thought along medical lines

in those days. I shall give some extracts from the annual address of Dr. Newman.

He says:

"The aim of medicine is twofold. First, prevention of disease; second, its cure.

"It is undoubtedly true that the attentions and efforts of our profession have been far too exclusively directed to the solution of problems connected with the second named object; and that the great and overshadowing importance of the first has not always been sufficiently recognized. It is to be feared that in the treatment of disease, due importance has not always been given to the fundamental fact that healthy life everywhere requires a proper supply of all essential factors of life, that no drug can supply to the system the place of proper nutriment, pure air and warmth. And to my mind one of the most gratifying evidences of true progress in our art is the growing tendency in the profession to give greater prominence to hygienic means and less to drugs in the treatment of disease.

"I would by no means wish to be understood as decrying the efficacy of drugs in the treatment of disease, but it is irrational and mischievous to suppose that any drug, however useful under certain circumstances, can supply to the system the place of proper nutriment, pure air, or any other indispensable factor of life. There is good reason to believe that the causes which produce one-half of all the diseases from which we now suffer are subject to man's control.

"It is in the prevention of disease rather than in its cure that philanthropists and Christians will find their largest inducements of labor and their surest prospects of reward; nor in wealth or fame, but in the consciousness of having conferred lasting and inestimable blessings upon mankind. The relation of the physician to society then is not of a therapist alone, but that also of a conservator of the public health. His discoveries and achievements are locked up and limited in their dissemination by no patents by which society is indirectly taxed for his pecuniary remuneration, as is done in every other



art, and it is in the satisfaction of feeling that he has succeeded in the accomplishment of these objects that he reaps the richest rewards. Were I requested to define the true physician in such a way as to distinguish him from every other species of the genus 'doctor,' my definition would be simply this—one whose chief aim is the elevation of the science and the perfection of the art of medicine and the alleviation and prevention of disease with all its attendant train of frightful concomitants. He whose professional life does not approach this standard, whether he sails under the flag of a regular diploma, or under the flaunting colors of some pathy or ism, lacks the essential attributes of a true physician and is at best a charlatan and a hypocrite—an excrescence upon the professional body and a parasite upon the body politic—who sees in the suffering of others only the opportunity for his own selfish and pecuniary advancement and who supplies society with nothing for which he does not demand and receive an equivalent—often more.

"It is chiefly to the labor of our profession that the average duration of human life has been increased in the past, and it is to the same source that society must look for its farther increase in the future. The history of the past clearly shows that to look elsewhere will be to look in vain; that however many competitors we may have in the field of therapeutics, in the great work of preventing disease and prolonging human life, we have none whatever. As conservators of the public health, every physician should feel himself responsible to society to the extent of his abilities and opportunities for the prevention of disease. Nor should we by any special pleading beguile ourselves with the idea that in this great work we have nothing to do."

These are fine words, noble sentiments, and show a remarkable insight of preventive medicine when we stop to consider that it was not until fifteen years later that the first work on preventive medicine was published. But the doctor sees just as clearly another side of this

question and speaks out his convictions in a clear and forceful manner in the following:

"But if the obligations of the physician to society are so momentous, there are surely some things on the part of society which it is our right to expect and our duty to demand. A profession, from whose unselfish and unpaid labors society has derived such inestimable benefits, and to which alone society must still look for further release and protection from the vast amount of unnecessary disease which is filling thousands of premature graves and everywhere crippling and destroying productive industry, is certainly entitled to some return. I will not say that it is the duty of society to look exclusively to the regular profession for all required therapeutic services although such a proposition would, I think, be entirely reasonable and logical. But so long as the mass of mankind are so entirely uninformed as at present upon all the subjects connected with our science and our art, and so long as the popular ideas respecting the nature of disease and the mode of operation of remedies are so crude and superstitious as at present, it is not surprising that the simple and ignorant often become the dupes of charlatans and pretenders. Such are entitled to our commiseration and our sympathy rather than our censure. But the patients of charlatanry are by no means confined to the uneducated and the ignorant. It is a sad commentary upon the consistency and rationality of mankind that so many men of intelligence and learning, men often whose pursuits and vocations are such as naturally tend to cultivate and induce habits of careful observation and close reasoning, become believers and enthusiastic defenders and propagators of fanciful and absurd systems of therapeutics from the fundamental doctrines of which all reason and common sense have been carefully sifted out."

Having served this indictment against society which might be as truly said today as fifty years ago, the doctor relates another little incident which is very char-

acteristic of present-day journalism. He says:

"Not long since in the Lawrence Republican, T. Dwight Thatcher, editor, appeared the following modest local: A SURGICAL TRIUMPH. We were shown yesterday an example of what is now called conservative surgery. One of the engineers employed by the Union Pacific Railway Company had his left hand severely crushed in coupling cars last October. Many surgeons would have unhesitatingly amputated at the wrist. Doctor Wilder, of this city, however, took charge of the case, exsected the crushed bones of the hand and succeeded in saving the third and fourth fingers in good condition, so that the man can still manage his engine and have considerable use of his hand."

"I called upon the editor and directed his attention to what I considered an unjust and uncalled for aspersion upon the medical profession; I endeavored to show him that he was not sufficiently conversant with the principles of medicine to speak with such positiveness as to what 'many surgeons' would do under any circumstances, and that particularly in this case, as he did not see it after the injury and before the operation, but only after several months had elapsed, it was impossible for him to know that 'many surgeons' would not have saved three fingers instead of two. After a full discussion of the subject, the editor refused to admit that his language was in any respect unjust, and asserted in the most positive manner that he believed the statement was entirely true. I candidly confessed to him my great surprise at finding him so utterly incapable of appreciating the true relation which as a journalist he bore to the medical profession."

Of course, the doctor was right, and it only goes to show how similar conditions were then and now, and how utterly futile it is to beard an editor in his den and try to convict him of error.

I have thus taken up a good deal of your time in quoting from this second annual address. I hope it has interested you as it

did me to note the similarity of conditions then as compared with our day. They had their trials, they found often times a lack of appreciation on the part of the public, no matter how unselfish and altruistic were their motives; but because they did not find a ready acceptance of their work and efforts, they did not turn aside from their high ideals, but hewed close to the line of duty.

In the sketches of these few corporators of the Society, I hope I have added something to the permanent records of our Society. I have chosen these because I knew them and have been able to get reliable data from members of their families. I would not have you think it was because these were more heroic, more honorable than others, and I would be glad if this Society might secure a short sketch of each of the corporators of our Society.

These all were undoubtedly men of hope and vision, else they would not have left comfortable homes and lucrative practices as many did, and come out to a hazardous life in this warring territory. They came here with high aims, with lofty purposes, not only that they might earn an honest living and provide for those dependent upon them, but to carve a great commonwealth, to build a great state on these prairies marked in the books they studied as part of the "Great American Desert." With all these public aspirations the doctors did not neglect to organize themselves into a society where annually they could meet for exchange of views in their profession and to cultivate good fellowship. Their life was not an easy one, there were perhaps more thorns in their pathway than we find today in ours, much that we enjoy that is good came by way of vicarious sacrifice, it has ever been thus: "They labored and we have entered into their labors."

These men had their dreams, they fought as good soldiers, they had hope and vision, and they cultivated the sunny side of good fellowship, of close comradeship. It took these four elements to make a man then, it takes the same today. If a man lack one of these he will find his greatest happiness



and usefulness by the cultivation of this particular side of his life,—that which lies over against his greatest need.

We have our problems to meet, our battles to fight. It takes the same courage, the same fidelity now as then to make a good citizen, a good doctor. They had moral stamina and physical courage, they were tender and sympathetic in the sick room but they also kept a "Sharp's rifle" handy and did not hesitate to use it when their friends on the border attempted to interfere with a free ballot and an honest count. "They walked softly but carried a big stick." It is to be hoped that we today are as well prepared for life's duties as were they, that we will be found willing to go as far as they did defending our rights both at home and abroad.

Our first business is to bind up the broken-hearted, to set at liberty them that are bruised, but we must take care not to be so carried away with our mere bigness, our material possessions, our isolation and our love of peace as to throttle the fighting spirit of our natures.

### —R— The Etiology of Iritis.

By J. W. KIMBERLIN, M.D., Kansas City,  
Mo.

Read before the Eye, Ear, Nose and Throat Section, Jackson County Medical Society, March 9, 1916.

At last during the past few years a scientific study of the causes of iritis has been made and it is to be hoped that in the future, textbooks on Ophthalmology instead of blindly copying previous ones when they speak on this subject, may contain some reliable information. And it is hoped that the study of the causes of this condition will place the oculist in a position to render much more ideal help to his patients. Not that we haven't been able to cure iritis in a reasonable length of time and dismiss our patients with eyes returned about to normal in the majority of cases seen early. But in the light of present scientific knowledge our duty is a higher one than this and our full responsibility should not end till our knowledge of the cause will indicate treatment that

we are convinced will help repair the inflamed eye in the shortest space of time and will indicate procedures to be undertaken by ourselves or referred consultants that will render recurrences unlikely.

Up until very lately iritis was considered to be one of the diseases of the eye and due to lues, gonorrhea, tuberculosis, rheumatism or idiopathic causes. See any textbook. How different now is the present thought. Iritis is an eye complication of some general focal infection such as lues, gonorrhea, tuberculosis, dental, sinus or tonsil trouble with probably autointoxication added. Reading it hurriedly it does not sound so different from the old. As we analyze the two, we find iritis now a complication and not a disease. We find rheumatism and idiopathic causes missing from the modern conception. Those formerly put down as idiopathic were those not due to lues, rheumatism, tuberculosis or gonorrhea—spontaneous—simply an admission of failure to find the cause. Chronic rheumatism was first doubted as a cause in the literature at the end of the nineteenth century; now the acute also is very much doubted. "It has been too much the custom to classify all cases of iritis in which at first sight lues, gonorrhea, trauma or gout can be excluded under the vestigial term of rheumatic or idiopathic iritis. As regards rheumatic iritis, all positive, clinical or bacteriological evidence of the existence of such condition is lacking." (Dernehl, *Ophthalmology*, April 1915.) "For years rheumatism used to be given as a cause of iritis, but we now know that rheumatism never does cause it. Cases of rheumatic iritis are still quoted in the books, but they do not exist. Rheumatism was a term so loosely applied, that all forms of chronic septic absorption were called rheumatism. Chronic septic absorption is capable of producing iritis, but not rheumatism." (Ormond, *Practitioner*, Oct. 1915.) In an article on the Evolution of Toxemic Iritis (*Br. Med. Jour.* Sept. 1914), Beaumont reviews the causes of iritis, much doubting rheumatism as a cause, holding that



no iritis is primary, invariably secondary and always infective. "Practically never is acute rheumatism coincident with iritis. It is this anomaly which explains, perhaps justifies, the position of doubt taken up by some ophthalmic surgeons for many years, on the question whether iritis is ever rheumatic. Rheumatism was a convenient term because it predicated nothing, and its flag waved over a heterogenous battalion of diseases. That flag lies trampled in the dust."

Because the local condition improves after the exhibition of salicylates is not at all a proof that rheumatism is the cause.

Probably most of the cases attributed to rheumatism were from gonorrhea, either recent or from some old reawakened focus. The acute as a cause has been known since Brodie's work in 1818. It was not known then, but is now that the gonorrheal germ may be latent for many years (as many as 35, Schnitzler) and then become virulent "on some chance disturbance of the normal processes of metabolism." Fuchs and DeSchweinitz as late as 1913 in their report to the International Medical Congress at London are of the opinion that the gonococcus plays a minor role as a cause of iritis. Goldzeiher, Griffith, Beaumont and others take the opposite view and put gonorrhea next to lues and report many cases in which the gonorrheal infection appeared in from a few months to as high as fifteen years before. The literature is full of reports of gonorrheal iritis, a few as early as 1850 and 1860 and many in later years. In 1911 Sidler demonstrated the gonococcus in the aqueous. "The germ is probably carried by the blood stream and finds lodgment in the small iris vessels and produces cell proliferation by its growth and toxins." (Gordon Byers.) Pure cultures have been gotten from the blood in other conditions like endocarditis by a number of men. We find it often stated that iritis does not appear after the first infection, but after the second or third relapses. Mackenzie in 1854 gave the classical clinical picture

as a rapid onset, highly inflammatory, plastic lymph filling the pupil and anterior chamber, pain very severe and symptoms disappearing rapidly. Others have added to the differential clinical etiological diagnosis. Ormond (Practitioner, Oct. 1915) says that if there are one or at most two synechia with iris quite thick and little pain, it is luetic. But if the anterior chamber seems full of gelatinous material it is gonorrheal. Others have stated that recurrences point to a gonococcus etiology. Reber (Ophth. Record, Jan. 1915) cites three cases of gonorrheal iritis proven so by complement fixation test, while the test for Wassermann, staphylococcus, etc., was negative, and also by the relief given in from two to four hours by a Neisser sero-bacterin injection. Lamb (Ophth. Record, July 1915) reports a case with immediate relief from an injection of bacterin.

As to other focal infections as a cause, some serious work has been done in the past year or so. Rosenow (Sept. 1915) reports having produced iritis in animals on intravenous injection of streptococci strains taken from rheumatic lesions and from pus pockets in tonsils. DeSchweinitz (Ophth. Record, Dec. 1915) speaks of iridocyclitis produced from the teeth and tonsils. He calls attention to the fact that there may be mixed causes and the finding of one should not preclude search for other focal infections. He illustrates by citing a case who had lues but whose iritis cleared up only after a suppurating ethmoid was corrected.

Black, in speaking of "Ocular Diseases from Dental Lesions" (Ophth. Record, Dec. 1915) gives a thorough description of dental lesions and modes of infection. He says that alveolar abscesses are present in 25 per cent of all mouths. Long says that about 60 per cent of iritis due to sepsis is caused by Rigg's disease. The two oral causes to be looked for are pyorrhea and root abscesses. As DeSchweinitz puts it, "general oral sepsis or extensive pyorrhea alveolaris need not necessarily be present as the instigator of uveitis. The

infection may come on from a small tooth root abscess, or from a blind abscess, the presence of which is unsuspected, and often undetected until the X-rays are employed." (Ophth. Record, Dec. 1915.)

Influenza iritis is reported by Reber in November, 1915, the complement fixation test being negative in Noguchi, cholesterolin, Neisser, pneumococcus, streptococcus, staphylococcus and micrococcus catarrhalis and positive for influenza bacillus. The etiology was made more positive by the fact that the pain subsided and the conditions cleared up quickly after the use of influenza mixed sero-bacterin.

The literature for many years has contained reports of tubercular iritis and while not frequent, tuberculosis as a cause has never been questioned. Trauma as a cause we will not discuss as it is usually self-evident. Several cases of iritis following injections of salvarsan and mercury salicylate have been reported (Zeit f. Angln., June 1914, and Annals Ophth. July 1914). Autointoxication as a cause is yet not well worked out, but its probability is assumed by Reber and Beaumont.

Considering that iritis is simply a complication of some distant focal infection the importance of finding and correcting that infection and assisting in clearing up the eye condition presents itself. It is often not an easy search with the present available means, but complement fixation tests, though not always satisfactory, are becoming more so in the hands of experienced pathologists. Positive results are to be depended upon. Wendell Reber of Philadelphia and E. V. L. Brown with E. E. Irons of Chicago, working independently, have done some very thorough and careful work on this subject during the past year. While each series of cases has not been large, their work when published will stand out in the literature as about the first along this line. Every case of iritis in Reber's hands had a blood complement fixation test for lues and for gonococcus, pneumococcus, streptococcus, staphylococcus, bacilli coli, and influenza bacillus.

In the series there were fifteen cases; five were caused by lues, three by gonorrhea, one by influenza, one by gastrointestinal toxemia, one by tuberculosis, two probablyluetetic, and two obscure.

A striking feature of their results has been the frequency of gonococcus as a cause. In the old figures probably an average opinion of the frequency of non-traumatic iritis would give lues 50 to 60 per cent, rheumatic 15 to 25 per cent, gonorrhea around 10 per cent, and tuberculosis 2 to 5 per cent. The new research work would displace rheumatism entirely and give lues about 35 to 40 per cent, gonorrhea around 20 per cent, tuberculosis 7 to 20 per cent, influenza 7 per cent (Reber), tonsil and dental infections about 5 per cent each and sinus affections about 2 or 3 per cent. These percentages are based on small series, but agree as to lues and gonorrhea. Another striking feature was the number of cases in which there were two or more causes found. In Brown's series, the cause was given as follows: Lues fourteen cases, gonorrhea ten cases, tuberculosis eleven, suppuration processes in the teeth, tonsils, sinuses or genitourinary organs in nine. In nine remaining cases in this series there were so many adequate causes found that it could not be determined which was responsible. There were twenty-six adequate causes found in these nine cases. The prize case had active lues, gonorrhea, tuberculosis, badly infected tonsils and alveolar abscess. Besides these and the iritis the patient may have had excellent health; Dr. Brown did not say.

In conclusion it may be said that there is great importance to be placed on the diagnosis of the infective process behind every case of iritis.

It is fortunate that ophthalmologists are at last making scientific progress in clearing up this diagnosis.

The literature has been full of this subject, but only for the past year, and much thought will undoubtedly be given it in the future.

Say goodbye to the rheumatic bug and



the idiopathic bugaboo as a cause and greet Mr. Latent Neisser, N. Influenza, Mr. Riggs and their friends.

—R—

### Who Shall Practice Medicine?

W. H. YOUNG, M.D., Fredonia, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

In primitive ages the treatment of disease was surrounded by mystery and connected with all the various forms of superstition prevalent at that time. A large majority of the methods of healing were supposed to have been derived from supernatural sources. Being of miraculous origin, it was universally thought that the power to cure was given instantly and without preparation of any kind.

The study of the history of ancient methods of treatment leads the investigator through a continuous round of sudden inspiration and immediate ability to chant the sick back to health and happiness; the person who was so fortunate as to receive this power was soon overwhelmed with requests for demons to be cast out or evil spirits driven away.

Religion and the art of healing were inseparably connected. All sorts of mythological legends were made a part of the many plans for curing. Healers and laity alike held these ideas.

As scientific research became more general, the better informed healers began to acquire a knowledge of the use of medicinal agents. Later on, a part of the public accepted advanced ideas, and superstition became less popular. By the profession the art of healing was more completely separated from the religious realm. After a time laws were enacted requiring certain preparation before obtaining the right to pursue the practice of medicine and surgery. The barber on the corner was no longer sought as the surgeon of the community. Medical and surgical schools were founded, and these arts were placed on a more scientific basis.

It is not to be presumed, however, that the whole public has at any time accepted this advanced ground and abandoned super-

stitious and miraculous healing. Every medical practitioner daily comes in contact with the same soothe-saying notions which were in vogue centuries ago. Demon slayers and spirit drivers are still abroad in every land.

Only two or three years ago, in a small town in Wilson County, Kansas, there appeared a long-haired, filth-laden individual who proclaimed that all diseases were to be attributed to improperly fitted shoes. Scores of people of the little city of Fredonia readily fell in with the ideas of this learned individual. Automobiles beyond number daily journeyed to this wonderful healer, only to return wearing shoes which were from two to four sizes too large for them. Every victim was rigidly instructed not to stand or walk on linoleum of any kind. This self-taught "doctor" carried on his astounding work for several weeks, never charging one cent for the marvelous cures which he promised; but only collecting a small fee of \$5.00 to \$7.00 for each pair of shoes which had probably cost him fifty cents at some bankrupt sale counter.

A thousand and one different schemes similar to these have come into existence and vanish after a very short time. Among the non-medical healers who have recently gained immunity or legal recognition, are Christian Scientists, Osteopaths and Chiropractics. Each of these sects has loudly proclaimed that injury is sure to follow the use of medicines of any kind. At one time it was an insult to these distinguished healers to even suggest to them that medicines might be of any benefit to a sick patient.

When the Osteopaths, a number of years ago, were given a legal standing, the law first enacted gave due respect to their absolute aversion to any medical work by saying that "They shall not administer drugs or medicines of any kind nor perform operations in surgery." (See Session Laws of 1901, Chapter 254, or General Statutes of Kansas of 1901, page 1,344, paragraph 6674, section 6.) The Osteopaths at that time said that they had no desire to enter the field of medicine and surgery. But time often effects a radical



change in the minds of men. An examination of the Session Laws of 1913 will now reveal the fact that the words saying that Osteopaths "Shall not administer drugs or medicines of any kind nor perform operations in surgery" have been stricken out and the following words inserted: "This act shall not apply to any registered Osteopathic physician or any chiropractic practitioners of the state of Kansas."

The United States internal revenue inspector, under the Harrison act, states that the attorney-general of Kansas has given to the federal authorities the ruling that Osteopaths are physicians with full right to use opiates and practice minor surgery, and should be issued a license the same as any other physicians of the state. These licenses were issued in accordance with this decision, and the same United States inspector further states that his examination of the records of physicians of Kansas disclose the fact that some of the Osteopaths are issuing more opiates under the Harrison act than are prescribed by many of the physicians of the medical profession. There is no reason why the Chiropractors may not do the same.

The M. D. who wishes to register in Kansas is first required to spend four years of nine months each in a recognized medical college before he can even ask the privilege of undergoing an examination in medicine and surgery to determine his fitness for engaging in the medical work.

By the laws of the state of Kansas, the Osteopath or the Chiropractic is given full power to practice medicine and surgery anywhere in Kansas, and guaranteed absolute immunity from any requirements for previous preparations in these arts, or submitting to an examination to determine whether he has any knowledge of medicine and surgery. The fact that many Osteopaths are today giving morphine hypodermically and prescribing any and all other medicines frequently, seems very inconsistent with many of their former claims that drugs have no virtue. If these sects have decided to enter the field of medicine and surgery, is there any reason why they

should not be compelled to make the same preparation and pass the same examinations required of the M. D.?

The present condition of the medical laws of Kansas seemed quite a surprise to the members of the Wilson County Medical Society. In fact the United States inspector expressed surprise, and stated that he knew of no other state in which similar conditions existed.

The length of time during which the people of Kansas are to tolerate this unjust state of affairs will depend largely upon what the M. D. practitioners do to correct it. Surely no one else will be so kind as to take the initiative.

The question of proper and fair dealing with various healing sects has been a puzzling one for many years. Any attempt to blot any sect of healers out of existence by drastic legislation is sure to arouse the sympathy of the public and result in failure. The action of one of the state universities in establishing a separate sectarian chair of medicine and therapeutics seems to have met with very satisfactory results. By this provision the sectarian student, along with the medical student, takes the same work in anatomy, physiology, pathology, bacteriology, hygiene, chemistry and surgery. The only separate studies are materia medica and therapeutics.

A scientific knowledge of these above-mentioned branches is just as essential to the success of the Christian Scientist or the Osteopathist or the Chiropractic as it is to the Regular or the Homeopathist or the Eclectic. The name of Christian Scientist implies that he should be scientific. There can be no reason why a scientist should not be a Christian or a Christian a scientist. But for a Christian Scientist to fail to be a scientist is a gross absurdity. A man who claims to be a Christian Scientist and refuses to be a scientist is neither a Christian nor a scientist. Not a Christian because he claims to be a scientist and fails to make good his claim. He is not a scientist because he refuses to make himself acquainted with the scientific facts which are connected with his calling as a healer.

The Chiropractic who claims to deal with the spinal column and its accompanying structures is under as much necessity for a knowledge of these branches as any other. In this state this sect of healers is absolutely free from any requirements whatever. The Chiropractic board of examiners never having been organized, the person who practices by this method needs only to express a readiness to comply with this law and he is at liberty to commence business, without any previous qualification.

This Chiropractic law which calls for a minister and a school teacher to be on the board is the greatest legal joke of the age.

The Osteopaths must be credited with the fact some of their schools require a thorough knowledge of anatomy and physiology. Graduates of these colleges are entitled to the degree Doctor of Osteopathy. But when they ask to enter the field of medicine, the degree of Doctor of Medicine should be required of them. To claim the right to be a doctor of medicine, without being a Doctor of Medicine, is as dishonest as for an unscientific man to claim to be a Christian Scientist.

A plan to grant a separate chair in the state universities to any sect which will guarantee ten graduates each year, who would meet all the other requirements of the institution, would place all sects on a scientific basis and eliminate the undesirable conditions which now confront the practitioners of Kansas.

Any healer who had met these requirements could at least be scientific in applying his method of treatment. Under this plan the sects which have no merit would gradually be abandoned and become extinct. While any new meritorious plan of treatment would be able to gain a permanent standing. Medical legislation would also be very much simplified.

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### **Sex Gland Implantation.**

G. F. Lydston, Chicago (Journal A.M.A., May 13, 1916), reports three cases additional to those previously published by him and his conclusions to date in regard to the implantation of the sexual glands.

His conclusions, in substance, are as follows: For hormone therapy purposes, successful total or partial hetero-implantation of human sex glands is practicable in either sex. By successful he means the formation of a new blood supply and more or less prolonged existence of the gland with hormone production. The prospect of success from anastomotic implantation at present is not brilliant. Glands from the living subject are most desirable, though rarely obtainable, and those from the healthy dead body taken before the beginning of decomposition are of value. The glands of the male can be successfully implanted in the female and the reverse is probable, but the female tissues are apparently more hospitable. The physiologic and therapeutic results are independent of the site of implantation, but the vicinity of the peritoneum and canal of Nuck in the female and the tunica vaginalis in the male are sites of election. The blood pressure apparently is modified, and senility may possibly be delayed and longevity increased. It is probable that arteriosclerosis in its early stages may be benefited and senile dementia may be benefited. The climacteric may probably be postponed and defective psychic or physical or sex development are definite indications for the operation and certain psychopathies such as dementia praecox may possibly be benefited by implantation. Chronic diseases of the skin due to or modified by nutritional disturbances may be benefited and possibly cured. All conditions incidental to sex gland mutilation in either sex afford positive indications, benefit being probably inversely as the length of time that has elapsed and the age at which it occurred. In properly selected cases successful implantation ought to increase physiologic activity with all its benefits, and all morbid conditions in which malnutrition exists are likely to be benefited by sex hormones.

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Methods in the empiric practice of medicine move in cycles like the fashions in dress.



# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - Editor

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### Sickness Insurance.

You may not want it. You may not like the plans upon which it is proposed to administer it. The latter you may be able to modify, but you will not be able to prevent the universal adoption of some plan of sickness insurance for all those who have not more than a modest income. It has been decreed by the powers that be that it is an economic necessity. It may not be realized next year, nor in ten years, but some time we will have some form of sickness insurance.

The Committee on Social Insurance of the American Association for Labor Legislation has recently sent out, for criticism and discussion, a tentative draft of an act providing for social insurance. This committee was appointed in 1912. It makes no claim that the present draft is in every way satisfactory, and is anxious to hear criticisms and suggestions.

Perhaps no one but the committee fully realizes the difficulties to be met in devising a form of legislation that will be fair to all concerned and that will meet the exigencies in every department of labor.

We are naturally most concerned with the effect such legislation may have upon the practice of medicine. Any legislation which will reduce the average income of physicians or too completely engross them in the care of patients will retard the

scientific progress in the practice of medicine and will be undesirable to the medical profession and to the public by whom the effects of inefficient service will be most keenly felt.

Upon an analysis of all the plans so far submitted for social insurance, the medical profession seems to be counted upon to bear the burden. According to the plan proposed, and the schedule submitted, the fund collected in each district or division will be fairly constant. The amount contributed by the insured will be regulated by the amount of his wages, the amount contributed by the employer will be regulated by the number of his employees and the wages he pays them, and the amount contributed by the state will be determined by the total of the other contributions. There can be but little fluctuation then in the total amount of the fund except from unemployment, either on account of sickness or depression in business. It is fair to estimate the amount of the fund as bearing a constant relation to the number of insured.

While it is interesting to learn that each of 30,000,000 laboring men average nine sick days each year, such figures can not be used in an estimate of expenditures in the administration of the fund for sickness insurance, in any one district or division. While the fund is created on a fixed scale of contributions and must, therefore, be fairly constant, the demands upon the fund must be variable—as variable at least as the seasonal variations in the sickness of any community.

With much increase over the average number of sick among the insured there will be an increased charge against the fund: First, for the cash benefits which are fixed by the proposed law at two-thirds the wage of the insured; second, by the cost of medicine, surgical supplies, etc., which are fixed by the market price of those articles; or by the expense of hospital care, which may also be regarded as a fixed charge; third, medical attention, which is apparently regarded by those responsible for the plan proposed as the only

elastic item in the bill of charges against the fund. In either of the plans for remunerating the physician, suggested by the committee, he is made to bear the burden of an overdraft upon the fund. In none of them is there a constant relation between service and remuneration. None of them is consistent with that efficiency which is so essential to the ultimate realization of the purposes for which health insurance is advocated.

There is no suggestion that a fixed sum should be set aside for cash benefits and distributed pro rata among the beneficiaries. There is no suggestion that a fixed sum should be set aside for medicines, surgical supplies, etc., and distributed pro rata among the dealers who furnish these items, although a limit is fixed for such expenditures. There is no suggestion that the employer, or the employee, or the state should pay more than a definite proportion of a fixed assessment. If the cost of the insurance exceeds the estimate, the physicians who render the medical service must pay.

There is but one equitable plan upon which social insurance can be administered—at least but one plan which would be fair to all, physicians included—and that is an assessment plan based upon the cost of insurance. Let such assessments be levied each month as will raise the amount required to meet the cost of the insurance for the preceding month, and pay physicians reasonable fees for the services they render. In other words, put medical services on the same basis as other charges against the fund.

We will not question the argument of the committee that the employer should help pay the cost of the insurance, because he benefits by the better health and better conditions of his employees. We will not question the obligation of the insured to contribute to his own protection. We will not question the obligation of the state to contribute to the care of its dependent citizens. But upon what theory of justice should the physician be compelled to contribute more than any other tax-paying

citizen who does not belong to either of the above classes?

Referring to the committee's report, we find the following: "*But whichever system be adopted, one thing is clear: all medical service to the insured will be paid for, including the unremunerated dispensary practice of today. The problem becomes one of deciding which method of arranging for the 100 per cent collections of the future is preferable, in the interests alike of patients, doctors, and administrators.*"

The "100 per cent collections" has a soothing sound, but it is only a placebo. It simply means that instead of giving one man \$2.00 worth of service for \$2.00 and another \$2.00 worth of service for nothing you will give each of them \$2.00 worth of service for \$1.00. Under these conditions you might be in no worse case than at present, but the proposition does not hold true when applied to the practice of the average physician. There are too many of the unemployed, casually employed, and self-employed, whose incomes are insufficient to permit them to carry the voluntary insurance the law provides, but whom the physicians must care for as charity patients. In fact it is seldom the regularly employed that constitute the physician's free list, but those who are not provided for in this proposed law.

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### **The Profession and the Medical School.**

The action of the authorities of the medical school, in asking for a committee from the Kansas Medical Society to keep in touch with its condition, should be of no little advantage to the profession and the school. While this committee may not have,—and probably should not expect to have,—any voice in the management of the school, its report of the work being accomplished, and its suggestions as to how the profession may best aid in the future development of medical education in Kansas, will help at least to establish a clearer relation between the school and the profession.

It is unfortunate for the medical department, as well as other departments of the



University, that a little matter of a few hundred dollars in salary should deprive the school of some of the best members of its faculty. The sentiment in Kansas has always been most favorable to its educational institutions, and although some legislative bodies have been inclined to restrict appropriations for these institutions, the voice of the people has continually been for better educational facilities.

The personnel of the faculty in a medical school is a factor of no small consideration in its success and popularity. Men are known in medicine by their work and their value to the institution with which they are associated should increase with the volume of their work and the extent of their reputations.

It is rumored that some of the strong and progressive men on the faculty of the medical school may be allowed to accept more lucrative positions in other institutions. We cannot blame them for being tempted by an increased salary, but it is no particular credit to Kansas that its good men must look elsewhere for a proper compensation for their services.

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#### **A Urinary Test for Syphilis and Its Comparison with the Wassermann Reaction, by Carl D. Gray.**

This test is made with two solutions, of which the first consists of one gram of resublimed iodine in chloroform or carbon tetrachloride, and the second is ten per cent phosphoric acid. The six c.c. of fresh urine is added one c.c. of the first solution and the mixture is shaken for two or three minutes. The tube is set aside when the chloroform settles to the bottom, being pearly white if the reaction is negative and pink or deep purple if the reaction is positive. One c.c. of the second solution is then added and the test tube again shaken—if then, after standing three to five minutes, the chloroform clears and becomes white, the test is negative. Nervous or diuretic polyuria gives a positive reaction, as does the drinking of alcoholic beverages and the presence of sugar in the urine. With these exceptions, its trial in

200 cases would seem to make it a positive test for syphilis, and it closely parallels the Wassermann, in no case being negative where the Wassermann was positive. On the other hand, in a few cases of suspected syphilis it was positive where the Wassermann was negative.—Medical Record.

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#### **The Early Diagnosis of Whooping Cough.**

Dr. H. W. Jacob, of Malvern, writes to the British Medical Journal for April 22d that the early diagnosis of whooping cough is one of the trials of the general practitioner, and, in the absence of an epidemic, one is liable to be misled into allowing a child with an apparently harmless cough to infect others while the unmistakable signs which subsequently develop are still lacking.

During an outbreak last year, Doctor Jacob had considerable opportunity for observing probable cases in the earliest stages, and found that every case of suspicious cough showed marked conjunctival congestion in the region of the external canthus subsequently developed into whooping cough. In examining for the sign, one directs the patient to look toward the nasal side of the eye under examination, when, on separating the lids at the external canthus, a tumid, congested mass somewhat resembling a large phlyctenule may appear on the bulbar conjunctiva, just within the external canthus. This swelling may or may not be accompanied by injection of the palpebral conjunctiva, but Doctor Jacob came to regard it as an indication in doubtful cases of this nature.—New York Medical Journal.

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#### **Effect of Epinephrine on the Medullary Centers.**

Dr. E. D. Brown reports his findings in the Journal of Pharmacology and Experimental Therapeutics, April number.

##### **EFFECT ON THE RESPIRATION.**

"It is commonly known that the intravenous injection of epinephrine often causes a disturbance of respiration.

In cases where small doses are injected there may be observed an increase in both the depth and rate of the respiratory movements; on the other hand large doses usually diminish the depth and rate and may even stop respiration for a certain period of time.

This effect, so far as I am able to judge from the statements made, where the phenomenon is mentioned, is believed to be due to a direct action upon the respiratory center.

In my experiments I found the effect of the drug very variable, although it agrees as a whole with the statements made regarding its action on respiration.

In some instances, where the perfusion fluid contained a small amount of the drug, there was an increase in both the depth and rate of respiration.

In other cases a like amount of the drug would cause a marked slowing or perhaps it would stop the respiration for a short period.

If the perfusion fluid contained larger amounts of the drug there was apt to be a sudden cessation of respiration. In some instances natural respiration did not return, but usually the animals began to breathe again after varying periods of time, but the respiration was quite apt to be more or less irregular. In some of the animals the respiration stopped after the first dose of the drug and artificial respiration was employed to sustain life during the rest of the experiment. It may be stated that in the compilation of the results obtained on heart rate and blood pressure, that due care was exercised in excluding all cases where there was any probability that asphyxia might have been in part responsible for the effect.

#### SUMMARY.

1. In summing up the results obtained from the experiments, they tend to show that when epinephrine is perfused through the cerebral circulation, it may in a certain per cent of cases cause a slowing of the heart and that this slowing is at least in part due to a direct stimulation of the vagus center.

2. There is certain evidence which strongly suggests the probability that the drug also stimulates the vasomotor center.

3. The effect on the respiratory center is very variable. There is evidence of both stimulation and depression, and neither of these effects appear to be governed by the size of the dose of the drug.

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#### Peripheral Point of Attack of Strychnine.

In the Journal of Pharmacology and Experimental Therapeutics, April, Dr. Frederick S. Hammett reports the results of his experiments in determining the point of attack of strychnine. The summary and conclusions are as follows:

#### SUMMARY OF RESULTS.

1. Strychnine injected into a curarized frog does not increase the irritability of muscle tissue.

2. In a strychninized frog previously subminimal stimuli become effective when applied to a nerve connected with its muscle.

3. When the muscle of a strychninized frog is stimulated through its nerve the onset of fatigue is delayed and more work is accomplished.

4. When the muscle of a strychninized frog is directly stimulated there is an initial increase in capacity for muscular work with earlier fatigue. The total work done is not changed.

#### CONCLUSIONS.

The site of the peripheral action of strychnine is the receptive substance of the neuro-muscular junction. Its action here is similar to its action on the synapses in the cord leading to a decrease in resistance to the passage of the nerve impulse and a facilitation of its transmission across the junction. As a result of this there is normally a more efficient utilization of the material present serving as the source of muscular energy. There may be an initial increase in the capacity for work, but this is not due to any increase in irritability of muscle tissue. Muscle tissue itself is not increased in irritability by strychnine.



### Quinine and Urea Injections in Hyperthyroidism.

Dr. Leigh T. Watson, Oklahoma City, has an article on this subject in the New York Medical Journal, April 22. We quote the following:

"In selected cases, I believe hyperthyroidism can be relieved by means of injections of concentrated solutions of quinine and urea into the thyroid.

The method is recommended only to relieve hyperthyroidism and not to remove the goitre. It is sometimes true that in small toxic and atoxic goitre the inflammatory reaction following the injection is sufficient to cause the disappearance of the tumor; but the process is slow, and when the injection is used for this purpose alone, the results are liable to be disappointing.

The procedure is one that is surrounded by certain dangers, immediate and remote. One inexperienced is liable to puncture the trachea or one of the large blood vessels, or to make the injection into the soft tissues of the neck. Injections that are too extensive will produce the same symptoms of myxedema that follow the removal of too much thyroid by operation. For this reason, it is necessary to discontinue injections before symptomatic relief is secured.

The necessity of minimizing the slight pain from any injection by the use of local anesthesia cannot be too strongly emphasized.

Preliminary injections into the thyroid gland of a few minims of sterile water, are necessary to raise the patient's threshold to stimuli, thereby preventing an acute attack of hyperthyroidism which might otherwise follow the slight pain of the first quinine and urea infiltration. As soon as no hyperthyroid reaction follows the water injections, their usefulness is at an end. The use of quinine and urea injections without this preliminary precaution is likely to be disappointing if it is not disastrous."

—R—  
**Dr. M. J. Perkins.**

Dr. M. J. Perkins was born at Norland,

Ontario, on December 25, 1872. He passed away on the morning of June 3rd, 1916, at Spearville, Kan.

The news of Dr. Perkins' death at an early hour this morning brought shock and grief to the entire community where, for the past six years, his kindly nature, his indefatigable energy and his unusual skill have won for him the respect and admiration of all. Although in delicate health for a number of years, and at times a great sufferer, so indomitable was his will, so unflagging his zeal in his chosen work, that this last illness of but a few days' duration came as a surprise to even his close friends.

When about twenty years of age Dr. Perkins moved to Michigan, and for seven years worked first as brakeman then as conductor until able to realize his ambition to study medicine. He was graduated from Trinity College, Toronto, in 1903, going immediately abroad to take a degree at Edinborough, thence to London and Berlin for post-graduate work. Returning to this country, he established an office in Toronto, practicing successfully until a severe and obstinate attack of pleurisy necessitated a less vigorous climate. A short residence in Kansas City not proving beneficial, he sought the farther west, and settled in Spearville in the spring of 1910. He was a member of the Elks lodge at Great Bend and was a Mason of Shriners degree.

It has been Dr. Perkins' ambition to establish in the little town of his adoption, a perfectly equipped, modern hospital, and sparing neither labor nor expense, he has worked toward this end until today, the beautiful building stands complete, a pathetic monument to its builder.

### —R— Experiments With Rubber Gloves.

At the December meeting of the Western Surgical Association, at Des Moines, Dr. Carl E. Black, of Jacksonville, Ill., discussed the use of rubber gloves from the standpoint of how much they interfered with the tactile sense. He had used a unique plan of arriving at this

practical question. It was well known that a considerable number of eminent surgeons had steadfastly refused to have their tactile sense blunted by the use of gloves, and had considered it more advantageous to their patients than asepsis. He had had 144 observations on blind pupils who read entirely with their fingers and were entirely dependent on the sense of touch for that purpose. Each observation consisted of reading with the fingers thirteen lines, approximately 100 words, of Braille text printed on both paper and brass plates. The text was new and unfamiliar and new text was used for each experiment. Six people, three boys and three girls, high school students at the Jacksonville State School for the Blind, were selected for these experiments. A number of tests were made with the bare fingers, which showed the average time in which the pupils could thus read the text was forty-eight seconds, while the average time for reading 100 words when the hands were covered with rubber gloves of medium weight and well fitting, was seventy seconds. With oil inside the gloves, or rather with the hands covered with oil and then the gloves put on, the time was reduced to sixty-eight seconds, while with the gloves put on with the hands wet, the time was still further reduced to sixty-five seconds. The average time for reading with gloves, under all conditions, was seventy seconds.

The observations showed the difference between thin, thick, and medium weight gloves. In one observation an excess of powder was put in the gloves, while in another observation very loose fitting gloves were used. With loose, ill-fitting gloves the average time for reading 100 words was eighty-six seconds. These observations presented some interesting facts about the gloves, and showed the difference between the carefully fitted medium weight gloves and the loose, ill-fitting thick gloves. They also emphasized the fact that gloves put on with the hands wet impaired the sense of touch less than gloves put on dry.—N. Y. Med. Jour.

Before the etiology and the pathologic processes in pneumonia were understood, digitalis was considered a valuable remedy, if given early in the disease, because it was said to overcome the congestion. In recent years it has been recommended on the ground that it is a chemical antidote to the poison of pneumonia.

—R—

Twenty-five years ago quinine in large doses was regarded as the best treatment in pneumonia. There were a great many deaths—said to be from heart failure. It was practically abandoned. Quinine is again becoming popular because it is said to be an antidote to the pneumonia poison.

—R—

We have a few dozen lapel buttons—official badges of the Kansas Medical Society—that may be had by members of the society at twenty-five cents each.—Journal, Kansas Medical Society.

—R—

**Proceedings of the Fiftieth Annual Meeting of the Kansas Medical Society, Held at Topeka, Kansas, May 3, 4, 5, 1916.**

**MEETING OF THE COUNCIL.**

The Council met at the Elks Club May 3 at 10:00 a. m. Meeting called to order by the President. No business was transacted at this meeting, and motion was made and carried that the Council adjourn to meet at the call of the President. Motion was made and carried that the House of Delegates meet at 5:00 p. m. instead of 7:30 p. m. as designated on program. Council adjourned.

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May 3, 1916.

At the hour designated the regular session of the Kansas Medical Society convened to listen to the address of the President, and the reading and discussion of the scientific papers on the program. This was the fiftieth anniversary of the Kansas Medical Society. One day of the meeting was devoted to papers presented by physicians residing outside of the state, and Drs. Fred H. Albee, of New York,



Fransford Lewis, of St. Louis, and G. W. Crile, of Cleveland, presented papers, after which an open meeting was held, and an address was given on public health.

#### MEETING OF THE HOUSE OF DELEGATES.

The House of Delegates convened at 5:00 p. m. May 3, 1916. Called to order by the President, Dr. O. D. Walker. On roll call a quorum was found to be present.

It was moved and seconded that the reading of the minutes of the previous meeting be dispensed with. Motion carried. The next order of business was the reports of officers.

#### *Secretary's Report.*

To the House of Delegates: First I will submit the financial report. The following is the financial statement for the year ending May 6, 1916:

Total balance on hand May 2.	
1915, divided as follows:	
Medical Defense .....	\$1,200.00
General Fund .....	3,453.23
Total .....	\$4,653.23
Amount received from all sources for year ending May 2, 1916:	
Dues from members .....	\$4,151.50
Interest on Harper loan .....	55.00
Total amount received .....	\$4,206.50
Total .....	\$8,859.73
Amount paid out for the year ending May 2, 1916:	
Medical Defense .....	\$1,189.27
General Fund .....	1,806.92
Total .....	\$2,996.19
Balance on hand May 2, 1916.	\$5,863.54
Statement as to how the two funds now stand:	
Medical Defense .....	\$1,410.73
General Fund .....	4,452.81
Total .....	\$5,863.54

Nothing of material interest has occurred during the past year that effects our organization. We have had, I think, the best year since the Society was organized on the present basis. Our paid up membership is above fourteen hundred at the time this report was written, and we are getting in many new members. I believe that when all the returns are in we will have fifteen hundred active members this year. Our Medical Defense plan has been a help towards securing and hold-

ing members. I have received a number of letters from physicians over the state, who are not members, inquiring as to the benefits to be derived from the Medical Defense plan.

I feel the Committee on Medical Defense has done excellent work this year and should be given credit accordingly. It has cost less this year than any year since the plan was adopted except the first year. I find that there is a feeling in many parts of the state among the lawyers, that they do not want to take a case of alleged malpractice against a physician. They feel that the chances are against them when the whole medical fraternity is back of each case. One lawyer who does a large business in damage suits, informed me that he would never take another case against a doctor. I think the Component County Societies should place more stress on the advantages to be had by reason of the Medical Defense plan, when soliciting new members. I am saying this for our defense plan, for which I was not very enthusiastic when first adopted, and was somewhat skeptical as to the successful working of such a plan.

For a short time we had an organizer from the A. M. A. working in this state, and from the reports received at my office, he brought in about ninety members. In several counties he did some good work in harmonizing the differences among the members, and ironed out a few misunderstandings; after a careful review of the work accomplished, I have come to the conclusion that secretaries of the County Societies could do this work and let them retain the dollar for each new member, and when there are misunderstandings among the members, it is the duty of the Councillor to try and adjust the differences and we should pay the Councillor for the time he spends in doing it, and in that way keep our money at home.

I want to call the attention of this body to the fact that the State of Tennessee has adopted by legislative enactment, practically the plan of a medical law that was prepared by the commission appointed by

Governor Hodges to draft a Medical Practice Act. Professor Irby R. Hudson, of Nashville, Tenn., states that he secured a copy of the bill from Kansas, prepared by this committee and given him by Dr. Frederick Greene. This bill was prepared by Drs. Sawtell and Milligan, and provided for a Board of Preliminary Examination. I have always thought it was a proper measure and am more confident than ever, after the State of Tennessee has made it a law.

Sometimes we get discouraged that we do not have a larger per cent of the practicing physicians in our Society, but in making comparison with the members of other states, I find that our membership compares favorably with that of other states and that we lead many of the states that you would naturally think would have a larger per cent of membership than Kansas.

On this, our fiftieth anniversary, I think we have occasion to congratulate ourselves, for we have as fine a body of clean and ethical men practicing in this state as can be found anywhere. We have so few large cities that we do not get in the limelight as they do in some other states, but we have our small hospitals in almost every town, that are doing just as good work as is done in the larger institutions. We find we have just as scientific men who are conscientiously doing just as good work in bacteriology and pathology along the lines of the latest and most modern teachings in medicine, as can be found anywhere in the world, and I think at this, our fiftieth anniversary, the members of the Kansas Medical Society can take a just pride in their professional standing among their sister states.

Respectfully,

CHARLES S. HOFFMAN, Secretary.

#### *Treasurer's Report.*

Mr. President and Fellows of the Kansas Medical Society: I have the honor of submitting to you the following report:

Cash on hand May 1, 1915.....	\$4,653.23
Cash taken in to May 1, 1916.....	4,206.50
	<hr/>
	\$8,859.73

#### EXPENDITURES.

Cash paid out of General Fund to May 1, 1916.....	\$1,806.92
Cash paid out of Medical Defense Fund.....	1,089.27
	<hr/>
Total expenditures .....	\$2,896.19
Cash on hand subject to check.....	\$5,963.54

Respectfully,

L. H. MUNN, Treasurer.

#### *Editor's Report.*

To the Council of the Kansas Medical Society: As editor of the Journal I beg leave to submit the following report for the year ending May 3, 1916:

Average number of copies per month.....	1,766.
Receipts for the year from all sources.....	\$3,070.71
Cost of publication, all expenses.....	2,345.63

Balance on hand .....	\$ 725.08
Advanced by Society .....	600.00

Net profit .....	\$ 125.08
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A special edition of the Journal for the Medical Department of the Kansas University was published in April. For this number eight extra pages were added and 3,200 copies printed. The extra expense for this issue was \$120.00. A reimbursement for this expense is promised by the University, but this item is included in the expense account here presented.

During the latter part of the year a heavier grade of paper has been used, which with the advance in the price of paper has added somewhat to the cost of publication.

During the year we have sent out a great many copies of the Journal accompanied with letters and application blanks soliciting membership. We believe the returns have fully justified the expenditure. The expense of this effort is also included in the account for publication.

While it is gratifying to be able to report a net profit to the Society in the publication of the Journal, your editor feels that the interests of the members of the Society would be best served by its further enlargement and improvement and an extension of its scope of usefulness to the profession.

#### RECEIPTS.

	Advertising	Subscriptions	Miscellaneous	Totals
May.....	\$ 184.38	\$ ....	\$616.04	\$ 800.42
June.....	96.20	2.00	.....	98.20
July.....	202.77	2.00	8.25	213.02



August. . . . .	367.50	.....	.....	367.50
September. . . . .	61.07	2.00	.....	63.07
October. . . . .	108.54	.....	4.00	112.54
November. . . . .	210.04	2.00	.....	212.04
December. . . . .	87.00	4.50	.....	91.50
January. . . . .	146.54	2.00	2.00	150.54
February. . . . .	176.18	.....	.....	176.18
March. . . . .	82.09	.....	.....	82.09
April. . . . .	703.61	.....	.....	703.61

\$2,425.92    \$14.50    \$630.29    \$3,070.71

## EXPENDITURES.

	Journal Printing	Other Printing	Stamps, Postage	Address'g, Typing	Miscella- neous Salaries	Totals
May 16C' . . .	\$119.88	\$1.50	\$10.00	\$2.50	.....	\$133.88
June 15C' . . .	106.50	4.00	15.00	2.50	25.75	153.75
July 16C' . . .	113.50	11.50	.....	2.50	30.00	157.50
August 17C' . .	115.50	7.50	10.00	.....	3.05	136.05
Sept. 17C' . . .	111.55	.....	.....	.....	.....	111.55
Oct. 16C' . . .	113.75	3.25	25.00	.....	13.00	155.00
Nov. 17C' . . .	112.50	12.00	.....	15.00	.....	139.50
Dec. 16C' . . .	114.72	.....	10.00	2.50	.43	127.65
Jan. 16C' . . .	110.50	.....	15.00	2.50	.....	128.00
Feb. 17C' . . .	115.25	7.00	10.00	2.50	.....	134.75
March 17C' . .	114.00	.....	.....	4.00	.....	118.00
April 32C' . . .	186.00	9.00	15.00	10.00	30.00	250.00
					600.00	600.00

\$1,433.65    \$55.75    \$110.00    \$44.00    \$702.23    \$2,345.63

Respectfully submitted,

W. E. McVEY, Editor.

The President appointed Dr. C. C. Goddard and Dr. T. A. Jones as a committee to audit the books of the Secretary and Treasurer.

*Report of the Auditing Committee.*

We, the members of the Auditing Committee, have examined the books of the Secretary and Treasurer and find them correct.

C. C. GODDARD

T. A. JONES,

Auditing Committee.

*Reports of the Councillors.*

Report was received from Dr. C. W. Reynolds, Councillor of the First District, as follows:

To the Officers and Members of the Kansas Medical Society: As Councillor of the First District, I beg to submit the following report:

All of the counties are maintaining organizations, but a part of them have held but three meetings. Brown County maintains a good society. Nemaha has recently increased their membership decidedly, especially since Dr. Van Duzer was in the district. Repeated efforts to hold meetings in Jefferson County have failed, and

they have not had any meetings for several years. A joint meeting of Jefferson and Jackson County Societies was to have been held in Holton, on April 20, for the purpose of merging the two societies, but bad weather prevented the meeting.

Respectfully,

C. W. REYNOLDS, Councillor.

Dr. C. C. Goddard, Councillor of the Second District; Dr. H. B. Caffey, Councillor of the Third District; Dr. O. P. Davis, Councillor of the Fourth District; and Dr. K. P. Mason, Councillor of the Seventh District, each gave a verbal report of the work done in their respective districts.

Dr. H. N. Moses, Councillor of the Eighth District, gave the following report.

Saline County Medical Society, President Dr. L. O. Nordstrom, Secretary Dr. H. N. Moses. Membership, 26 from Saline County, 10 from Ottawa County, and 1 from McPherson County. Meetings at Salina and Minneapolis. Joint meetings at Lindsborg, with the McPherson County Medical Society, and at Lincoln, with the Lincoln County Medical Society. Lincoln County Medical Society, President Otto F. Dierker, M.D.; Secretary G. M. Anderson, M.D. Membership from Lincoln and Mitchell Counties. Meetings more or less regular. Central Kansas Medical Society, Secretary Dr. B. H. Mayer. Membership from Ellsworth, Russell and Ellis Counties. Meetings more or less regular. Physicians in Eighth District:

Saline County 40, members of State Society 27, fellows A.M.A. about 8; Ottawa County 17, members of State Society 11, fellows A.M.A. about 7; Lincoln County 13, members of State Society 9, fellows A.M.A. about 4; Ellsworth County 12, members of State Society 12, fellows A.M.A. about 5; Russell County 13, members of State Society 6, fellows A.M.A. about 4; Ellis County 11, members of State Society 6, fellows A.M.A. about 6.

HOWARD N. MOSES, Councillor.

Dr. C. S. Kenney, Councillor of the Ninth District, made the following report:

To the President and Council of the Kansas State Medical Society: I wish to

make the following report of the conditions of the component societies of the Ninth District, comprising the counties of Cheyenne, Rawlins, Decatur, Norton, Phillips, and Smith. There are two active societies in this district—the Smith County and the Decatur-Norton County. A large number of the physicians in Cheyenne, Phillips and Rawlins Counties affiliate with the Decatur-Norton Society. A large per cent of the members of this district are members of some society. Several times this district has joined the Tenth District in joint meetings. These have been successful at various times and I believe the custom will continue, notwithstanding that the last effort was a dismal failure owing to conditions over which no one seemed to have control.

It appears that the protection offered members by the State Society is an incentive for some to join, but a great majority affiliate in order to improve themselves and the status of the medical profession. To stimulate interest in the Society, outside physicians have been invited to read papers or address the Society. These efforts have been rewarded by good attendance at a number of meetings. On two occasions when I visited the Smith County Society, a good attendance was out to hear the visitors. In the Decatur-Norton County Society this plan has been adopted and promises to be a most excellent procedure to get the members out. We have also adopted another feature. The regular programs are mailed out about ten days before the meeting. The Secretary then sends a post card, which again reminds the member of the meeting, about three days in advance. I believe this so-called follow up system will pay well.

During the past year no effort was made to hold public meetings, and I do not know what the Societies wish to do about it during the coming year. Personally, I am heartily in favor of the plan, but it is a matter for the various societies to settle for themselves.

It seems to me that the medical profession in the Northwest is about as active

as ever and it looks like a prosperous 1916 in this district.

For the first time in the twelve years of its existence, death entered the ranks of the Decatur-Norton Society. Dr. V. C. Chrane, of Logan, died early in September. While lancing a felon for a patient he accidentally cut his finger. Sepsis developed, and he died a few days later. Dr. Chrane was a live wire in the profession in Western Kansas, and his untimely death was a loss both to the profession and the community.

Respectfully submitted,  
C. S. KENNEY, Councillor.

Dr. D. R. Stoner, Councillor of the Tenth District, made the following report:

We beg to submit the following report for your approval:

The Tenth District comprises the counties of Gove, Trego, Logan, Wallace, Sherman, Sheridan, Graham, and Thomas. Six counties have been visited in the past year. All of the counties have a very few physicians in them, and it is impossible to organize any separate county. We have one District Medical Society, the Tri-County originally, which now includes and has members in every county in the district. The Tri-County in the past year has held six meetings, including two public meetings, and one joint meeting with the Ninth Councillor District. Each year we are having a gradual increase in membership and now have a large per cent of the eligible physicians on our roll. We think the condition of our district is very good at the present time.

Respectfully submitted,  
D. R. STONER, Councillor.

Dr. J. A. Dillon, Councillor of the Eleventh District, and Dr. W. F. Fee, Councillor of the Twelfth District, made verbal reports of the work done in their districts.

The following report of the Medical Defense Board was given by Dr. O. P. Davis, Chairman of the Board of Medical Defense:



*Report of Medical Defense Board.*

The vouchers listed below cover the expenditures for medical defense during the past year:

No. 1—J. W. Lindley, reimbursement attorney hire .....	\$ 85.00
No. 2—L. W. Shannon, court costs, expenses, etc. ....	202.55
No. 3—E. D. McKeever, salary May and June, expenses, etc. ....	125.40
No. 4—J. R. Hales, Rich Hill, Mo., taking depositions etc. ....	7.05
No. 5—E. D. McKeever, services and expenses. ....	24.42
No. 6—E. D. McKeever, salary July and August. ....	100.00
No. 7—E. D. McKeever, expenses and per diem. ....	22.55
No. 8—E. D. McKeever, salary September and October .....	100.00
No. 9—E. D. McKeever, services, etc. ....	24.47
No. 10—E. D. McKeever, expenses, etc. ....	43.49
No. 11—E. D. McKeever, salary November and December .....	100.00
No. 12—E. D. McKeever, expenses, etc., to Rochester, Minn. ....	79.34
No. 13—E. D. McKeever, services, etc. ....	75.00
No. 14—E. D. McKeever, salary January and February. ....	100.00
No. 15—E. D. McKeever, salary March and April. ....	100.00
Total. ....	\$1,189.27

The following is a list of cases, and their issue or status, which have been handled by the Defense Board, since the present attorney has been regularly employed, with the exception of a case of George vs. Shannon, which he handled only in the Supreme Court. In all he has handled twenty-two cases, and this is a statement of all of them:

J. C. Woolry vs. R. R. Nevitt, Allen County, judgment for defendant for costs.

Hildred Woodruff vs. F. A. McDonald and S. C. Pigman, Cloud County, reported dropped.

O. F. Kruger vs. J. F. Lindley, Osborne County, judgment for defendant for \$90 doctor bill and costs.

David Kelse vs. Geo. W. Williams, et al., Crawford County, reported dropped.

Martha Stillman vs. George W. Jones, Douglass County, demurred out of court; judgment for defendant.

Quick vs. Young and Brock, Cowley County, judgment for defendant for costs; demurred out of court.

E. F. McRoberts vs. D. E. Clopper, Wyandotte County, still pending.

Martin Lloyd vs. Young and Brock, Cowley County, tried to one jury and hung; pending for second trial.

Helen Burnett vs. Frank Peak, Pratt County, pending.

Lucy Trice vs. Seth Hamel, Shawnee County, pending. This is really an action for damages for frightening the horse of plaintiff with defendant's auto, but there is an incidental allegation of malpractice.

Roberts vs. Leavell, Allen County, verdict for defendant for \$25 bill and costs.

B. F. Jeffers vs. R. J. McCune, Cheyenne County, pending. This is a suit brought by a doctor for his bill, and an outlawed claim for malpractice is set off against the bill. It was brought in justice court and a verdict rendered for the defendant. Our attorney advises that this small case is not of sufficient importance to justify this Board to fight, as it would be exceedingly expensive.

Anna Dwiggins vs. (Dr. Noble, dentist) and E. F. Hoover, Sedgwick County, pending.

John R. Ashley vs. G. M. Liston, et al., Douglass County, judgment for defendant for costs.

G. R. Bridges vs. J. B. Edwards, Neosho County, verdict for defendant for costs.

Mary A. Brooks vs. J. A. Davis, Wyandotte County, fate unknown. All our correspondence in the case has been referred by the defendant to his local attorney, who seemed peeved that we were taking any part therein. For more than a year we have heard nothing from either of them, and presume that the case is being permitted to die a natural death.

G. F. Gustafson vs. L. M. Powell, Shawnee County, pending.

Josephine Gustafson vs. L. M. Powell, Shawnee County, pending.

William E. Halliday vs. J. G. Wortman & Mills, Linn County, pending.

Grace Halliday vs. J. G. Wortman et al, Linn County, pending.

The plaintiffs in the last two cases appear to be reluctant to go to trial, as they have asked for a continuance every term. P. S. These two cases have been settled

out of court by the parties, without consulting this Board.

Roberta Heck vs. W. E. Mowry and J. W. Neptune, Saline County, pending.

A. F. Norton vs. A. J. Weaver, Cloud County, pending.

In the last few months our attorney reports that he has been offered several malpractice suits against physicians, three of them against prominent Shawnee County physicians. It is reasonable to presume that other lawyers have had similar opportunities. It is gratifying to know that lawyers all over the state are less eager to accept cases of this sort than formerly, and physicians are growing much more reluctant to take the witness stand against another physician. The public is just as ready as ever, though, to prey upon the doctor.

O. P. DAVIS, Chairman;  
K. P. MASON.

A report of the Committee on Public Health and Education was given by Dr. J. E. Sawtell, Chairman of this Committee.

A talk was made by Mr. W. A. S. Bird, a member of the Legislature from Shawnee county, along the line of medical legislation relative to the sterilization of criminals and sexual perverts, and motion was made to appoint a special committee to confer with the proper authorities, to draft a bill to be introduced at the next session of the Legislature. On motion this matter was laid on the table until the next meeting of the House of Delegates.

Motion was made to adjourn until 8:30 a. m. May 5. Motion carried and the meeting adjourned.

#### MEETING OF THE HOUSE OF DELEGATES.

The adjourned meeting of the House of Delegates convened at 8:30 a. m. May 5.

First in order was the election of officers, and the following officers were elected for the ensuing year:

President—Dr. J. W. May, Kansas City.  
Vice President—Dr. M. T. Sudler, Rose-dale.

Vice President—Dr. A. O'Donnell, Ellsworth.

Vice President—Dr. T. A. Jones, Liberal.

Treasurer—Dr. L. H. Munn, Topeka.

Delegate to A.M.A.—Dr. O. D. Walker, Salina.

Motion was made that the delegates to the A.M.A. be allowed to select their own alternates to the meeting of the A.M.A. Motion carried.

#### Councillors.

Third District—Dr. H. B. Caffey, Pittsburg.

Sixth District — Dr. E. S. Edgerton, Wichita.

Ninth District—Dr. C. S. Kenney, Norton.

Tenth District — Dr. D. R. Stoner, Quinter.

Eleventh District — Dr. J. A. Dillon, Larned.

Twelfth District — Dr. E. M. Carter, Greensburg.

The standing of the Council is as follows:

First District — Dr. C. W. Reynolds; term expires 1918.

Second District — Dr. C. C. Goddard, Leavenworth; term expires 1918.

Third District—Dr. H. B. Caffey, Pittsburg; term expires 1919.

Fourth District—Dr. O. P. Davis, Topeka; term expires 1917.

Fifth District—Dr. W. E. Currie, Sterling; term expires 1917.

Sixth District—Dr. E. S. Edgerton, Wichita; term expires 1919.

Seventh District — Dr. K. P. Mason, Cawker City; term expires 1918.

Eighth District—Dr. H. N. Moses, Salina; term expires 1918.

Ninth District—Dr. C. S. Kenney, Norton; term expires 1919.

Tenth District—Dr. D. R. Stoner, Quinter; term expires 1919.

Eleventh District — Dr. J. A. Dillon, Larned; term expires 1919.

Twelfth District — Dr. E. M. Carter, Greensburg; term expires 1919.

Motion was made and carried that the



Secretary be instructed to get up blank form of reports for the Councillors on which to make their annual reports.

Motion was made that the editor of the Journal have reprints of the President's Address at this meeting, and send one to each member of the Society. Motion carried.

The following resolutions were offered:

1. Resolved, That the Kansas Medical Society endorses the movement of the National Association for the study and prevention of tuberculosis, to establish an annual physical examination day at some time designated by the National Association, and commends to its members any active co-operation in the program for physical examinations. Adopted.

2. Resolved, That it is the sense of the Kansas Medical Society, in its fiftieth annual convention assembled, that the medical profession of this state is strongly in favor of the asexualization of all sexual perverts and degenerates of known criminal tendencies, and through a committee this day appointed for the purpose, proposes to enter into conference with similar committees which may be appointed by other representative social, religious or professional bodies of like opinion, to the end that effective, sane and wholesome legislation be devised and enacted along this line by the next legislature. Adopted.

A resolution was offered by Dr. C. L. Katz, regarding the Federal Anti-Narcotic Law or Harrison Law, and on motion was laid on the table.

Motion was made and carried that the House of Delegates adopt the design of the emblem used at this meeting as a permanent emblem of the Kansas Medical Society.

Motion was made and carried that the President appoint a committee to get statistics from the Dean of the University and establish a closer relation between the Kansas Medical Society and the Rosedale School of Medicine.

Resolution was offered as follows:

Whereas, The Kansas Medical Society has been so royally entertained by the

Shawnee County Medical Society and the Elks Club, who permitted us the use of their club rooms,

Therefore, Be It Resolved, that the Kansas Medical Society express to these organizations their appreciation of the many courtesies received and cordial welcome extended to them. Resolution adopted.

Motion for adjournment was made and seconded, and the meeting adjourned.

#### MEETING OF THE COUNCIL.

The Council of the Kansas Medical Society convened at 11:00 a. m. May 5, 1916.

Meeting called to order with the newly elected President, Dr. J. W. May, in the chair. Dr. Chas. S. Huffman, Secretary.

Councillors present: Drs. Reynolds, Goddard, Caffey, Davis, Mason, Moses, Kenney, Stoner, Dillon and Fee.

Motion was made that the State Society accept the invitation of the Saline County Medical Society to hold the next annual meeting at Salina. Motion carried, and Salina was selected as the place of meeting next year. On motion the date of the meeting was left over until the January meeting of the Council.

It was suggested that a time card be placed in each program for the next meeting, and mailed out to all members of the Society over the state.

Motion was made that the rules be suspended and the Secretary be instructed to cast the vote of the Council for Dr. H. B. Caffey for member of the Medical Defense Board. Motion carried and Dr. Caffey was elected member of the Defense Board, for the term of three years.

The standing of the Medical Defense Board is as follows:

Dr. O. P. Davis, Chairman, term expires 1917.

Dr. K. P. Mason, term expires 1918.

Dr. H. B. Caffey, term expires 1919.

Motion was made and carried, that an open meeting be held on the first day of the annual session next year.

Motion was made and carried that at least six men of wide reputation be selected, not only for their scientific attain-

ments, but for their medical ability as well, to present papers or addresses at the next annual meeting, at whatever cost.

Motion was made and carried that the public meeting be held on the evening preceding the first day of the general session.

Motion was made that the matter of enlarging the Journal be left to the discretion of the editor, to enlarge the Journal to what in his judgment was deemed best. Motion carried.

Dr. W. H. Graves, of Wichita, presented a matter before the Council, regarding the W. B. Saunders Co. of Philadelphia, claiming that this company would not make a settlement with him, as their solicitor, and the matter was discussed, and on motion, the Secretary was instructed to make inquiry of the W. B. Saunders Company regarding this case.

Dr. C. W. Reynolds, Councillor of the First District, presented the matter regarding Dr. Tolle's membership in the Nemaha County Medical Society, and it was discussed by the members of the Council, and it was decided to instruct the Secretary to take the matter up and attempt to iron it out in a manner that would be satisfactory to the members of the Nemaha County Medical Society and the members of the State Society.

Motion to adjourn was next in order. Motion carried and Council adjourned.

—————R—————

We have a few dozen lapel buttons—official badges of the Kansas Medical Society—which may be had by members of the society for twenty-five cents each, while they last.—Journal, Kansas Medical Society.

—————R—————

### Tri-County Medical Society.

At the regular meeting of the Tri-County Medical Society held at Goodland, April 20, at 2 p. m., the following program was given:

Diagnosis, Dr. F. H. Smith, Goodland.  
Acute Appendicitis and Its Treatment, Dr. W. C. Lathrop, Norton.

Case Records, Dr. E. J. Beckner, Goodland.

Clinics, Drs. Smith, Geulick, and Beckner.

D. R. STONER,  
Secretary.

—————R—————

### Kansas Hospital Association.

The annual meeting of the Kansas Hospital Association was held in Topeka on May 2. The following program was prepared:

President's Address, Dr. J. T. Axtell, Newton.

"The Training Schools for Nurses in Kansas," Sister Catherine Voth, member of Board of Registration and Examination for Nurses.

"The Responsibility in Cases of Hot-Water Bottle Burns," Dr. R. Claude Young, Arkansas City.

"The Small Hospital and the Training School," Dr. F. W. Shelton, Independence.

"The Necessity of Vital Reports," W. J. V. Deacon, State Board of Health, Division of Vital Statistics.

"A Bureau of Standards and Supplies," Dr. M. Trueheart, Miss Myrtie Proctor, R. N., Sterling, Kan.

—————R—————

### Second Annual Meeting of the Interstate Association of Anesthetists.

The second annual meeting of the Interstate Association of Anesthetists will be held at the Hotel Seelbach (Red Room), Louisville, Ky., July 26 and 27, in connection with the National Dental Association.

The association dinner will be served at the Hotel Seelbach and a number of prominent after-dinner speakers will enliven the occasion with their wit and humor. Special entertainment will be provided for all lady guests attending the Louisville meeting.

For further information and dinner reservations address

F. H. McMECHAN, M.D., Sec.-Treas.

Avon Lake, Ohio.

—————R—————

During the auto races to the top of Pikes Peak at Colorado Springs, Colo., August 11, 1916, the El Paso County Medical Society has arranged for a dollar dinner and other entertainment, at which time Dr.



Burton W. Sippy, of Chicago, will deliver an address on "The Treatment of Peptic Ulcer, Past and Present." You are invited. If you can be present, notify Dr. E. L. Timmons, chairman of the entertainment committee, at Colorado Springs, Colo., so provision may be made for you.

—R—

### **Sterilized Solutions in Ampoules.**

Hermetically sealed glass ampoules containing sterilized solutions of important drugs for hypodermatic use have assumed a commanding place in medicine within a comparatively short period. A few years ago, seeing the tendency in this direction, Parke, Davis & Co., brought out a modest line of something like a half-dozen formulas, notable among them, if we mistake not, being a solution of Adrenalin. From this small beginning the last has expanded until now more than fifty solutions are supplied in this form.

Solutions in glaseptic ampoules, it is obvious, have several advantages over those prepared in the ordinary manner. They are ready for immediate use; there is no necessity to wait until water can be sterilized and cooled. Accuracy of dose is insured, each ampoule containing a definite quantity of medicament. The solutions are aseptic. They are permanent.

Parke, Davis & Co. have just issued a new edition of their "Ampoules" brochure, a valuable little book of 70 pages, giving a complete list of their sterilized solutions, with therapeutic suggestions, dosage, descriptions of packages, prices, etc. The work contains also a useful therapeutic index and an informing chapter on hypodermic medication in general. Physicians and surgeons are advised to send to the Detroit laboratories of Parke, Davis & Co. for a copy of the book, which is supplied gratis.

—R—

### **New and Nonofficial Remedies.**

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the Ameri-

can Medical Association for inclusion with "New and Nonofficial Remedies":

Mead's Dry Malt Soup Stock.—A mixture containing desiccated maltose and desiccated dextrin (about equal parts) 47 per cent, wheat flour 47 per cent, potassium carbonate 1 per cent and moisture 5 per cent. Meade Johnson & Co., Jersey City, N. J. (Jour. A.M.A., May 20, 1916, p. 1623.)

Phenolphthalein-Monsanto.—A non-proprietary preparation of phenolphthalein admitted to New and Nonofficial Remedies. (Jour. A.M.A., May 20, 1916, p. 1623.)

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### **Propaganda for Reform.**

Controlled Clinical Trials.—At the "Cardui" trial which is now in progress, A. S. Loevenhart, Professor of Pharmacology and Toxicology at the University of Wisconsin, testified as to the conditions under which the clinical trial of a medicine would give results as certain as those yielded by the usual pharmacologic methods. Professor Loevenhart had testified that he preferred his students to be familiar with drugs the value of which had been clearly worked out by accurate clinical methods and shown to be useful in the treatment of disease. Asked as to the character of the clinical trials required to demonstrate the value of a drug, he held that there was no difference between a careful clinical test and a careful pharmacological test. Loevenhart explained that to determine if Wine of Cardui had the claimed action an experimenter would take a certain number of cases of amenorrhea, perhaps 50, and divide them into two sets; treat 25 with Wine of Cardui and the others without it and then make an estimate of the amount of the material passed at the time of menstrual period. Such trials carried out in a hospital, where the physician receives his reports from nurses and is not obliged to depend on the statements of the patients, he explained, would be as reliable as a properly conducted pharmacologic experiment (Jour. A.M.A., April 15, 1916, p. 1219).

What is a "Medical Authority"?—There

has been a tendency to look upon publishers of text-books as authorities and not to consider a physician as an authority on a certain subject unless he has written a text-book on it. That the publication of a book does not prove its writer to be an authority is the opinion of J. Clarence Webster, of Rush Medical College, expressed at the Cardui case which is being tried in Chicago. Having referred to Frank Billings as an authority, Webster was asked to define the term "authority." He replied: "As far as human being can be an authority on anything, I would regard a man who had worked at a particular subject in a scientific manner over a period of time, and who had more experience in that subject than other people, or most other people, as the best human authority that could be found." Asked if a man was more of an authority if he had written a book, Webster replied "Often less in the eyes of the world" (Jour. A.M.A., April 29, 1916, p. 1410).

**Viburnum Prunifolium Inefficient.**—J. Clarence Webster, holding the Chair of Obstetrics and Diseases of Women in Rush Medical College, testified in the "Wine of Cardui" case that he gave up the use of fluidextract of viburnum prunifolium because he believed that the benefit that he obtained from its use in pain in association with menstruation, was due to the alcohol in it. He had never had any reason whatever to believe that viburnum was of any value in warding off a threatened abortion. When in cases of painful menstruation he used the solid extract which contained no alcohol, he could not get the same results that he had obtained before, and he gradually gave up the use of the drug altogether. Arthur A. Small, senior physician at St. Joseph's Hospital, Chicago, testified of extensive experience with the use of viburnum prunifolium, while resident physician in the Toronto General Hospital. As a result of his experience there he is of the opinion that viburnum prunifolium is of no value in the treatment of female disease. In these experiments both the fluidextract and the solid extract

were used and it was found that the alcoholic solutions would prevent or lessen pain in some cases. In other words, the only action was that of the alcohol. J. B. DeLee, holding the Chair of Obstetrics at the Northwestern University School of Medicine, testified that years ago he gave large quantities of extractum viburnum prunifolium for the prevention of miscarriage, but found it useless (Jour. A.M.A., April 22, 1916, p. 1338; May 13, 1916, p. 1566; May 20, 1916, p. 1639).

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We have a few dozen lapel buttons—official badges of the Kansas Medical Society—which may be had by members of the society at twenty-five cents each, while they last.—Journal, Kansas Medical Society.

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#### **Foreign Protein Therapy.**

J. L. Miller and F. B. Lusk, Chicago (Journal A.M.A., June 3, 1916), report their experience with the use of foreign protein treatment in arthritis. During the past summer they used the intravenous typhoid vaccine, 200,000,000, in the treatment of typhoid. Later, as suggested by Ludke, they thought it might be of interest to compare the effects of albumose. They obtained some proteose from Jobling and Petersen and used it with marked advantage, and later a typhoid vaccine was substituted for the proteose. Immediately following the injection there was a moderate leukocytosis which was dependent in a measure on the acuteness of the infection. A chill occurred within five minutes to an hour. There was a rapid drop in the leukocytic curve and, the day following, a moderate definite improvement in the joint symptoms. Later they reduced the dosage to 75,000,000 with slightly less violent reaction. Three or four injections sufficed to relieve symptoms and in all, great relief followed one, or at most, two injections. Relapses, however, were frequent. Some of their patients have been discharged now five weeks without any relapse. They are keeping in touch with them as far as possible. It



is difficult to explain the nature of the reaction, but that it is due to a foreign protein and not a specific protein is certain, and, whether or not the future experience sometimes will show the real value of the treatment as a therapeutic agent, it will at least give some evidence of the nonspecificity. It does not, however, involve the question of the specificity of vaccines for a prophylactic purpose.

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### Better Roads.

Even under the most favorable conditions, the life of the country doctor is hard, a life of self-sacrifice, of self-abnegation. He is about his business all the time. He comes when he is called and where. He lives for others and his work is the work of alleviating human suffering, comforting human sorrows, saving human life. He does not receive much applause from the world about him and does not care for it. His charity is unmeasurable, his rewards are insignificant. He practices his profession under the hardest conditions. As a general thing, his patients do not live in luxurious surroundings, but are of the plain people rather more worth the saving than they who dwell in kings' palaces, and he has to deal with them as he finds them, whether in lowly hut or grand mansion. Time with him and with the patient waiting his ministrations is oftentimes the deciding factor in life or death. Only a few days ago, in Washington, the capital of the nation, where the streets might well be called golden because of what they have cost, a woman who had been run down by an automobile, died as the attending physician asserted, because under the traffic regulations the ambulance dispatched to the scene of the accident was compelled to run so slowly that death intervened. Scores of cases could be cited doubtless by country doctors of deaths that might have been avoided had it been possible for them to reach the patients in time to minister prompt relief. It would have been possible but for the almost impassable condition of the roads on which they are compelled to travel on their mis-

sions of mercy.

Few people who live in the towns with paved and lighted streets can appreciate the fearful darkness that falls upon the roads in the country when the sun goes down, and it is by these ways that the country doctor must travel in rain and snow and wintry weather whenever the call comes for his services. He does his bit faithfully. There are few slackers in this tribe. Dr. William McLure, whose story is told in Ian McLaren's "Bonnie Briar Bush," was typical of his sort, and there are thousands like him in this country; and when he has worn his life in service to his neighbors, all the people of glen, highland or marsh pay him tribute, even if none thought of making his ways easier when he was riding to their relief. Taking men as they are in the large, the wonder is that there are any who would choose the profession of the country doctor, the most devoted and consecrated of all who serve humanity. It is feared that the country people do not think about it, else they would insist for their own protection upon the building of better roads over which not only would they be able to transport their products and transact business but by which in time of sores need the country doctor could journey with expedition to those requiring succor.—American Highway Association.

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### Gonorrhea.

E. G. Ballenger and O. E. Elder, Atlanta, Ga. (Journal A.M.A., May 27, 1916), recommended the d'Arsonval bipolar current for destroying the gonococcus in the recesses where it cannot be reached. This, he says, is much more satisfactory than the use of the Oudin monopolar current. Within from two to ten seconds the follicle and surrounding tissue have become white and slough away, leaving only a smooth granulating surface. The patient's immunity, which was before only able to eradicate the organisms outside these protective recesses, completes the cure after the recesses have been thus destroyed and the adnexa are not infected.

Of course, acute or subacute cases are not adapted to this treatment. If the prostate and seminal vesicles are eliminated as possible foci the chances are about twenty to one that infected follicles keep up the inflammation. Sometimes prompt improvement does not result, but when it does, it proves the value of the treatment. When all the foci have been destroyed, the continuation of mild irrigation will finish the cure. The authors recommend as the most satisfactory instrument for diagnosis and cauterization the McCarthy's improved cysto-urethroscope. The electrode should be one which may be inserted into the bottom of the follicle to cauterize the entire tract. It can be made by inserting a 22 gage silver wire through a urethral catheter. A bulb can be made on its end by holding it in a Bunsen burner. The sheath should be wrapped in adhesive plaster around its proximal end so as to form a bulbous mass to prevent its passing too far into the urethroscope. Several types are illustrated. Brief histories are given of four cases thus treated, some of which have been long under other treatment without cure. Two or three treatments were the average required after learning the importance of inserting the electrode to the bottom of the pocket and applying the current until the mucosa overlying it turned white.

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### Emotional Glycosuria.

F. S. Hammett, Los Angeles (Journal A.M.A., May 6, 1916), gives a summary of the recent literature of emotional glycosuria since Cannon and others demonstrated that glycosuria was produced in animals from emotional excitement in the form of pain, fear or rage, and reports his own investigation of the subject with different stimuli. The different types of stimuli studied were four. The first was the effect of participation in a decisive football game, in which it was found that nine out of the seventeen subjects developed a glycosuria. A second type of disturbance was the effect of watching the game with a possibility of participating.

Six of the seven substitutes developed glycosuria. The third type of excitement was observation of the game without prospect of participation. Six of the thirteen spectators examined developed the condition. The fourth and last type of stimulus was a short but difficult written examination given to first year medical students, and sugar was found in eleven of the twenty-seven examined. That of every one of the subjects tested was free from sugar before the test had been demonstrated. Hammett believes that physicians in general should recognize this potentiality and not rely on diagnostic sugar tests too implicitly. Further observations to test the duration of the condition were made four hours after the excitation on eleven of the students examined, and in only one was urinary sugar demonstrable. He concludes therefore that emotional glycosuria is only transitory in nature, soon disappearing after the exciting cause.

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### WANTED—FOR SALE—ETC.

**WANTED**—By recent graduate of Kansas University Medical School, a practice for summer only. Address "M," Care Journal, Kansas Medical Society.

**DOCTOR**—Why not combine business with pleasure this summer and take a laboratory course in Los Angeles? For particulars, address C. A. Johnson, M. D., 1002 Burlington St., Los Angeles, Calif.

**WANTED**—In connection with a private hospital, an ambitious young man with fair knowledge of the microscope and pathology and a desire to become a first class internist. Will pay salary and expenses at first and a partnership if he makes good. R. C. D. care Kansas Medical Journal.

**WANTED**—Practice in Kansas town, 500-5,000 population. Describe town, country roads and town improvements; percentage of foreigners, nationalities, kind competition, ages, distances to competing towns, their size and numbers doctors; what have you, how long there (your books must show it); number business houses, price of land, fees. Address "K," Journal Kansas Medical Society.

**FOR SALE**—Static X-Ray machine made by National X-Ray Co., Topeka, Kansas. This machine is new, never having been used. A bargain. Ed. C. Jerman, R. F. No. 1, Topeka, Kan.

**FOR SALE**—A Victor Finsen Light Apparatus. Will sell cheap. Address Journal Kansas Medical Society, Topeka, Kansas.



# THE JOURNAL

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## Kansas Medical Society

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### Recognition and Treatment of Acute Frontal Sinus Headache.

HUGH B. CAFFEY, M.D., Pittsburg.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

It would be impossible to cover the whole subject of headache caused by the diseases of the accessory sinuses in the time allotted for this paper, and it would not, I fear, be of particular interest to this body of practitioners, so that what I shall have to say will be limited to a brief description of Acute Frontal Sinus Headache.

Coincident with the prevalence of a severe type of grippe such as has swept the country during the past season, there have been an unusual number of cases of frontal sinus headache of the variety to be dealt with in this paper, and it has been from the uniformly good results obtained in its treatment and the great assistance in its recognition by the co-operation of men in general practice that this paper was inspired.

It has very clearly demonstrated that the general practitioner sees more of these cases, and it is he who sees them first.

It has also demonstrated that this type of headache is often massed in with the symptom complex and that there is, as a rule, no definite conception of the pathology, and its treatment has been empirical, without any knowledge of how relief was finally obtained.

So common a form of headache and one so simply relieved should enlist the interest of every doctor.

Much could be said concerning the in-

timiate connection between the eyes and the nose and accessory sinuses. One writer has said that the eyes are two organs encased by the nasal cavities and brain and are contained chiefly within the nasal cavities. Headaches that are sometimes of the most perplexing kind, with symptoms referable only to the eyes, cases of sudden blindness in one or both eyes, may be completely relieved by clearing up a focus in the nasal cavities. In nearly all cases of frontal sinus disease there is associated first of all mouth breathing, either from habit or caused by some abnormality, such as a deflected septum, spurs or enlarged turbinates.

So many are not taught the proper use of the nose. We know that no organ develops without use. After adenoid and nasal operations and in many cases where no operation is required, we should do everything possible to correct the evil habit of mouth breathing. Man is supposed to represent the highest type of civilization, and along with this we should be able to say that he has the highest conception of body functions, but in this regard we must confess that most of us will profit by studying the breathing habits of the lower animals.

Dr. Jonahtan Wright, in his monograph entitled "The Nose and Throat in Medical History," has collected some very interesting facts which perhaps furnish the best source for historical information concerning the accessory sinuses. Bassilius first described the frontal sinus and believed it to be an air cavity. Other early observers taught that the sinus contained

a viscid mucus used for lubricating the eyeball. In the early days when darts and spears were common implements of warfare, wounds of the frontal sinus were frequent, and an old manuscript says, "If from a wound in the forehead blood and air emerges, the wound will not be fatal, but if no air emerges the wound probably will be fatal." This citation shows that the ancients were acquainted with the fact that the frontal sinus might be wounded without involving the brain.

We know the frontal sinuses today as two pneumatic cavities located one on either side of the median line of the forehead, almost directly under the eyebrows. They are lined with mucous membrane continuous with the lining of the nose and communicate with the nasal cavity by a small opening, the naso-frontal duct, which extends from the floor of the sinus downward and backward into the hiatus semilunaris, which directs the secretions so that they flow under the middle turbinate body. The sinuses are rarely, if ever, of uniform size in the same individual. It is a matter of common observation that the same is true of the antra and that the side which has the larger frontal sinus corresponds to the side which has the smaller antrum and vice versa. None of the other accessory sinuses have such complete drainage as the frontal, and a natural question then would be, why is it more frequently affected than the others? The reason is because of the location of the infundibulum or drainage canal which lies immediately under the middle turbinate body, so that when the turbinate becomes swollen and inflamed from acute rhinitis, grippe or other acute conditions, the naso-frontal duct is blocked and we have a situation analogous to that of a cork placed in the end of a funnel. The secretions are thus retained and air is excluded from the sinus. The absorption of the small amount of air remaining in the sinus is soon accomplished, and this leaves a sort of vacuum, or negative pressure, which is usually the first cause of pain. On account of bacterial activity which now be-

comes rapid, we may have pus formation and consequent accumulation of gas, retained under pressure and productive of much more acute and excruciating pain.

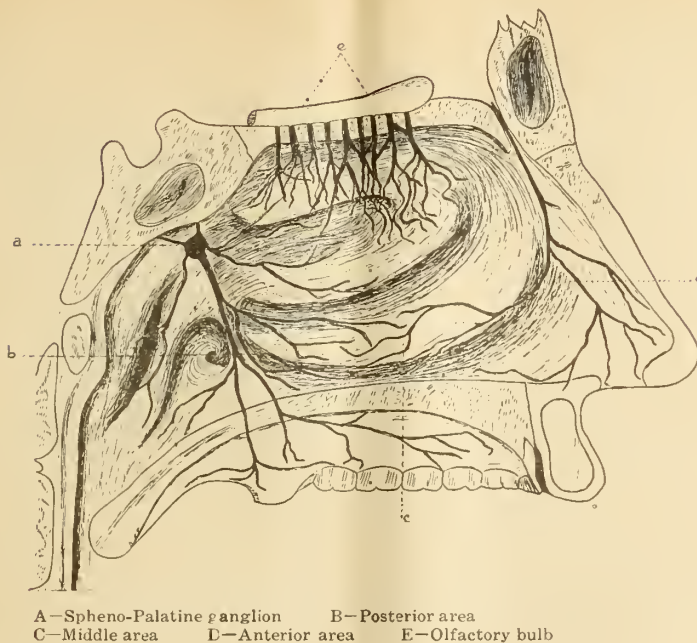
About two-thirds of the acute frontal sinus cases will complain of an intense boring pain around and over the eye of the affected side coming on during the night and early morning and gradually growing lighter as the day wears on. The pain is increased by stooping, sneezing or coughing, or any sudden jar, such as in walking.

In such cases the pain does not radiate with any degree of consistency, but such is not the case with pain coming from an affection of the sphenoid sinus. The nerve supply of this region, coming from the spheno-palatine ganglion (see figure 1), which is composed of a sensory, a motor and a sympathetic root, is responsible for the radiation of pain when it does occur, and it may affect any region which has nerve connection with this ganglion. There are two or three forms of acute headache which may be mistaken for frontal sinus headache.

Headache from eyestrain is usually a brow pain, with a burning sensation of the eyes, a desire to close the eyes, and is exaggerated by reading or using the eyes for other close work. When a patient presents himself with headache, he should be asked "Do you have a headache in the morning? Do you awaken in the night with headache?" If you get an answer in the affirmative, suspect that the trouble is not from the eyes, but a reflex condition from the nose. If the patient says, "When I read at night for any considerable time it brings on a headache during the night or the next morning," that points more directly to the eyes. The headache from acute toxæmia is commonly in the region of the temples, radiating to the top of the head and causes a dizziness on rising or stooping.

Migraine is a neurosis characterized by irregular periodical attacks of pain in the fifth nerve, is of a peculiar boring type, and is followed by prostration, nausea and





in nearly all cases by vomiting. Migraine is much more frequent in women than in men—about five to one. Frontal sinus headache, in our experience at least, is about twice as common in men, possibly because men are more exposed to weather conditions.

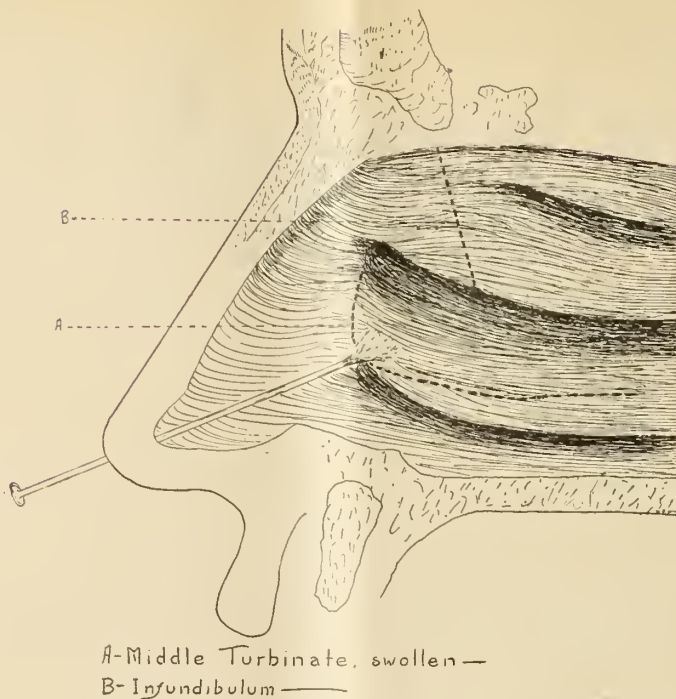
Pain from any of the conditions enumerated above may radiate so that the diagnosis or the recognition of the causative factors will baffle the skill of the most experienced, and for the want of a better term we often yield to the temptation to call it neuralgia.

Painful impulses in the eye, the ear, the upper jaw and the top of the head, are due to the sensory branches coming from the sphenopalatine ganglion supplying this region of the nose, and their anastomosis through the ganglion's connection with the superior maxillary division of the fifth nerve, with its dental and auricular-temporal branches. There is also an important connection between the anterior portion of the nose, the nasal nerve, a branch of the ophthalmic division of the fifth, which, as you know, comes from the Gasserian ganglion. It is reasonably conclusive then, that frontal sinus disease is capable, by exciting the sphenopalatine ganglion, of causing headaches of the types mentioned, but it cannot be inferred that all frontal sinus headaches originate through the direct action on the ganglion, on account of the prompt relief afforded by the liberation of retained discharges. This would indicate that the distention alone in the sinus by fluid, pus or decomposition gas, is capable of producing the same character of headache as would a deeper affection involving the nerves and ganglia.

Every doctor should be equipped with a head mirror, a nasal speculum and an applicator, and it is his duty to frequently examine the nasal cavities of his patients suffering with a cold. He will thus familiarize himself with the normal conditions and thereby be prepared to more readily recognize the abnormal.

On inspecting the nasal cavity in a case of acute frontal sinus headache, the middle turbinate body will be seen to be engorged and pressing out in every direction, filling the middle meatus and generally completely blocking the hiatus or drainage trough of the sinus (see figure II). Pus may or may not be observed coming from under the edge of the turbinate.

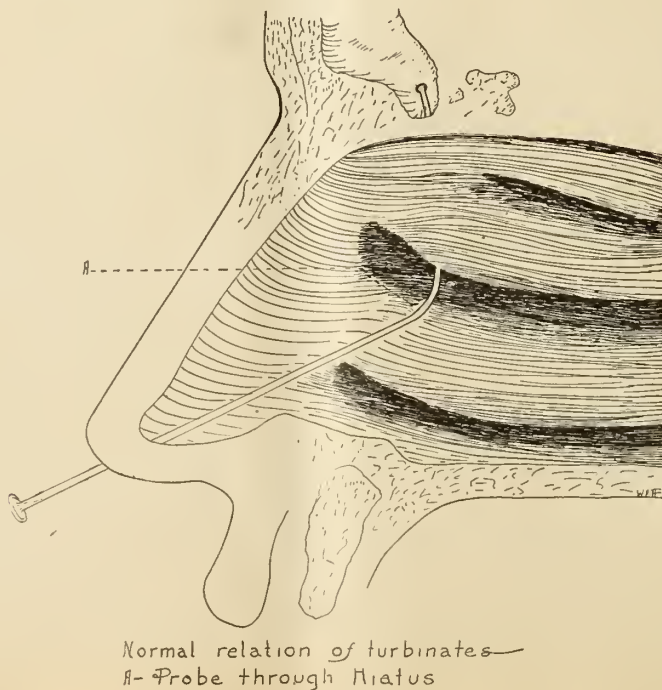
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Gentle massaging of the turbinate body with a cotton-tipped probe soaked in a 2 per cent cocain and adrenalin solution, will, in a few moments, cause contraction (see figure III). The turbinate assumes its normal relation to the surrounding parts, the stoppage of the frontal sinus is relieved and not infrequently I have had

the patient to remark at this stage of the treatment "that has relieved the pain already." One or two such applications followed by an alkaline wash or treatment with argyrol, according to the individual method preferred, constitutes the intra-nasal treatment.

Aspirin, codeine and quinine will some-





times be necessary to add to the treatment of the general condition. The intranasal treatment should be repeated once every day so long as the pain lasts.

If these cases are treated in this manner in the beginning of the affection, there is small chance of its becoming chronic and requiring surgical means for its relief. In the medical treatment of this class of cases, we are unfortunately confronted at the beginning by the fact that the chief local predisposing cause lies in the interference with drainage and aeration, which interference is most frequently produced by some obstructive lesion within the nasal chambers. In spite of this, however, these cases should be more carefully treated medically than at present seems to be the case. Surgery is more spectacular in its nature than the simple medical treatment, and the person who has been operated upon is more liable to boast of the skill of the surgeon who has drawn much blood from him, than is the patient who has been under the care of the medical man, who, with his effort has produced similar results with regard to the relief of pain.

It is not my wish to decry, nor do I wish for a moment to underestimate the enormous value of surgery in dealing with conditions caused by nasal obstructions. Surgery as a last resort has its place in this class of cases as it has in nearly all others, but the apparent eagerness to make a surgical case out of every frontal sinus involvement will bring the operator to grief sooner or later. Acute conditions, such as we are considering in this paper, are never amenable to vaccine treatment. Sub-acute forms have been more or less successfully treated by autogenous vaccines.

During the past winter we have used influenza mixed vaccines with good effect in cases of grippe complicated with acute frontal sinus headache. The intranasal treatment was also used, and at is uncertain whether the prompt relief was obtained by the shrinking and draining, or by the vaccines. Undoubtedly the grippe

was benefited, and we have reason to think the sinus condition was also favorably influenced by the procedure. Using the stock vaccines in the acute cases has this advantage over the auto-vaccines, that it takes about four days to prepare the latter, whereas the stock vaccines may be had on short notice.

Some advocate the use of hot applications, some use cold and still others have found the leukodescent lamp of benefit, but they are all to be considered simply as adjuncts to the main treatment, and, of course, their use should be governed by the exigencies of the case.

In conclusion, I would like to repeat by way of emphasis, that,

1. Acute frontal sinus headache is a very common condition during the season when colds are so prevalent.

2. That the men in general practice are in position to see more of these cases, therefore should be constantly on the lookout.

3. That the simple intra-nasal treatment of shrinking the enlarged turbinate, relieves the pressure and gives instant relief in nine out ten cases; and

4. That where there is a permanent nasal deformity the cases should have surgical treatment just as soon as the acute attack has subsided, for in such cases colds are frequent and every cold means a frontal sinus headache.

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### **Acute Torsion of the Spermatic Cord, Symptoms of Which Resemble Strangulated Omental Hernia.**

H. L. SNYDER, M.D., Winfield, Kan.

Read before the Kansas Medical Society, at Topeka, Kan.,  
May 3-5, 1916.

The first case of torsion of the cord was reported by Delasiauve in 1840. His case resembled strangulated hernia and repeated taxis was made previous to operation without relief. Since that time we have no literature on the subject of any consequence until Charles L. Scudder, of Boston, in the *Annals of Surgery*, 1901, reported one case and reviewed all reported cases up to that time. His article still

remains a classic, and there is very little new information we have to add. Then there had been 32 cases reported in something over sixty years. Charles E. Farr, of New York City, read a paper before the New York Academy of Medicine in 1912, which was published in the *Annals of Surgery*, 1913, in which he reported 150 cases, including Scudder's original 32. We have been able to find records in recent medical literature since his paper of about 50 additional cases, making a probable total of 200 reported cases up to this date.

Strangulation of the testis may be caused by other conditions than torsion, among which may be mentioned compression of the cord and kinking and stretching of the cord. Nearly all of the cases, however, are brought about by torsion. It is the concensus of opinion of all writers that this does not occur in the normal testes, at least half the cases give a history of tardy descent of the organ.

The tendency of all intra-abdominal organs to torsion in some form or other is recognized. You may have torsion of the spleen on its pedicle, the gravid uterus, the ovaries or ovarian cysts, the intestines, or in fact any of the organs of the abdomen that are capable of being moved at all are liable to torsion. This is due to the fact that they are in some form or other attached by suspensory ligaments. The intestine by its mesentery, the spleen by its ligaments, the uterus by its attachments, the ovarian tumors by their attachments, and so on.

In considering the development of the testes, we find that this same condition regarding the mesentery holds good. Studying its development from the Wolffian body, in the head of which the testis and epididymis and from the tail of which the vas deferens takes origin, we find that dorsal to these two structures the nutrient vessels of the testis appear, later on to be developed into its blood supply in the scrotal pouch.

During the second fetal month the testicle begins its descent from in front of the upper two lumbar vertebra, and by

the end of the sixth fetal month has reached a position corresponding to the internal abdominal ring.

Meanwhile, a process of the peritoneum, the processus vaginalis, has been extruded through the abdominal wall and has started to form the pouch in the scrotum. A fold of peritoneum, termed the genito-inguinal ligament, forms a continuation to the testicle from this pouch and by its contraction aids in its descent. At the sixth fetal month, if normally developed, the testicle is extruded through the abdominal wall, to descend to the bottom of the scrotum behind the peritoneal pouch, which later forms the tunica vaginalis testis. From the genito-inguinal ligament and the blood vessel attachments which enter the posterior part of the Wolffian body to supply these organs, is developed the mesorchium or the mesentery of the testicle.

Some of the early writers seem to think that torsion of the testicle occurred only when the mesorchium is absent. Other authorities, including Scudder, claim that the mesorchium is only greatly lengthened. This occurs because, in retarded descent of the testicle, the processus vaginalis goes on to the bottom of the scrotum and becomes fixed. If the testicle is retarded and does not descend during the seventh fetal month, but is descended after birth, or remains high up in the inguinal canal and later is extruded out through the external abdominal ring and descends to the bottom of the scrotum, there is not the normal relationship to the tunica vaginalis that we find in the testis that is descended at the usual time. Instead of descending behind the tunica vaginalis testis, it descend within this membrane; consequently, the organ is suspended, as it were, as a ball hung on a string, and the mesorchium is greatly lengthened to accommodate to this abnormal position. It is in this class of cases that torsion of the spermatic cord seems most likely to occur.

Chas. L. Scudder (*Annals of Surgery*, August, 1901), states that in all the cases reported to that date, the testicle was dis-



covered to be freely movable within the tunica vaginalis, and that it is impossible to twist the normal testicle. In some instances the epididymis and testicle were considerably separated from each other. In not a few, the cavity of the tunica vaginalis was larger than usual; extending well up the cord. In 47 per cent of all cases the testicle involved was undescended, lying close to the external abdominal ring. In every instance there was a long mesorchium, and, I will add, the scrotal attachment formed from the remains of the genito-inguinal ligament was missing. Because of this the spermatic cord might easily be twisted a number of times.

Then, the causation of torsion was not fully settled. Kocher believed that bifurcation of the cord was the causative factor. Lauenstein, Schmidt, and others, thought that the flattened condition of the testicle and the cord had much to do with it taking place. This flattened condition being marked in the ectopic testes; and the anterior abdominal muscles, as they relax and contract, assisted in twisting the testicle. English, of Vienna, advanced the theory that thrombosis of the pampiniform plexus exists, and that torsion is only part of the process.

Many of the cases reported give a history of violent exercise, but a great many more gave a history of torsion coming on at night while asleep. This fact has caused the writer to conclude that probably one of the most important factors in the production of torsion is the involuntary contraction of the cremasteric and the dartos muscles with the infundibuliform and intercolumnar fascia.

The dartos is attached purely in the scrotum and is part of it, and is not derived from any of the abdominal muscles. The cremasteric muscle arises from the internal oblique, the intercolumnar fascia from the external oblique, and the infundibuliform fascia from the transversalis. The testicle, in its descent, has brought down with it part of each of the structures of the abdominal wall. In

normally descending it is really more behind the processus vaginalis or peritoneal pouch than it is within it, and part of the testicle is not covered by this serous coat but is attached by a ligament to the scrotum.

The following conclusions are warranted as probable causes in the production of torsion or strangulation of the testicle: (1) Abnormal descent of the testicle, which may be within the abdomen, in the inguinal canal, or inside the tunica vaginalis testis; (2) the lack of ligamentous attachment to the scrotum, and lack of the support of the tunica vaginalis in front of the organ; (3) lengthening of the mesorchium with flattening of the testicle and apparent bifurcation of the cord; (4) the action of the involuntary muscles and fascia, the dartos, cremaster, infundibuliform and intercolumnar; (5) trauma, produced by either violent exercise or other injury.

The symptoms are: Sudden pain, vomiting, moderate shock, with swelling appearing in the inguinal region. Usually some swelling of the testicle around which there may be some effusion; there is no obstruction of the bowels, however, as there is in strangulated hernia. Vomiting does occur, but not so persistently as in hernia; neither is the shock so great as in hernia. There is no impulse on coughing, just as there may be no impulse on coughing in strangulated hernia. In some instances it may be extremely difficult in the fully descended testicle to tell the difference between a strangulated omental hernia and torsion of the cord in the inguinal canal, particularly in those cases where the processus vaginalis has not been obliterated completely.

In Scudder's and Farr's articles, each make a statement that 75 per cent of the cases occur before 24 and 30 years of age, respectively. More than half the cases occur before 20 years of age. Hence the condition is essentially one that develops about puberty; the majority of the cases occurring between 10 and 20 years of age.



The treatment of the condition: If seen within the first hour, it is sometimes possible to untwist the cord and save the testicle. If, however, it is not seen until the first hour has passed orchidectomy is necessary. The loss of the testicle is usually inevitable whether removed or not, for in those cases that are saved the testicle sometimes sloughs and when it does not slough it nearly always atrophies.

Reviewing the literature of some 50 cases recorded in the Journals in this country and abroad since Farr's article, we find a number give a history of repeated attacks; maybe have the cord untwined two or three times. In these cases some operative measure should be undertaken; the scrotum should be opened and the testicle and the cord anchored. By doing this many testes might be saved.

Ralph C. Cupler, Chicago, Ill., in *Surgery, Gynecology and Obstetrics*, August, 1915, reports a case of—"Acute Torsion of the Right Interabdominal Spermatic Cord, the Symptoms of Which Simulate Acute Appendicitis."—"The patient, a strong adult male, entered St. Anthony's Hospital at 8 a. m. November 1, 1913. He had had no previous abdominal symptoms. His present trouble began about 1 a. m. November 1, 1913. He presented the classical syndrome of an acute abdominal crisis. Examination showed the absence of the right testicle. It had never appeared in the scrotum or the inguinal canal. Pain came on suddenly, was severe, and was followed by vomiting, rapid pulse, tenderness and rigidity in lower right abdominal region, elevation of temperature and leucocyte count of 18,000. Differential white count was not recorded. The diagnosis of acute appendicitis or torsion of the right interabdominal spermatic cord was made at 8 a. m. the following day. The abdominal cavity was opened by retracting the fibers of the rectus muscle inward. The testicle was located midway between the umbilicus and the anterior superior spine of the ilium. The testicle moved freely, being suspended by the spermatic cord.

The cord contained two complete revolutions and by reason of this had occluded the blood supply to the testicle. The structure involved showed the process was acute and the testicle presented the appearance of gangrene. The cord and testicle were removed. The appendix was normal." This condition should be considered in the diagnosis of acute appendicitis.

Chas E. Farr added this case to his paper read before the New York Academy of Medicine in 1912.

"C," aged 7 years, of negative family and personal history until a month ago, when the parents first noticed that the right testis was not in the scrotum. The boy had been playing 'see-saw' and complained of great pain in the right groin, where a small lump was noticed. The pain soon passed away but recurred at intervals during the year past. On the night of admission to St. Mary's Hospital, June 11, 1913, the boy was taken with excruciating pain in the right groin, following excessive climbing. His bowels had not moved during the day but were regular previously. There was no vomiting. A tender lump was felt in the right groin. The boy was brought 30 miles in an automobile and vomited three times during the trip. On admission, a very healthy looking boy, no evidence of shock. No distention, temperature 99, pulse 90. Left testis normal, right scrotal sac empty. In the right groin, at the external ring, an exceedingly tender lump size of a pigeon's egg, slightly movable, giving no impulse. At the level of the internal ring a slight elevation was noted extending along the canal. Diagnosis, strangulated inguinal testis with possibly a Richter's hernia.

"Immediate operation, seven hours after onset of symptoms. Usual Bassini exposure. The tumor at the external ring was found to be a tightly strangulated loop of ilium, containing hard fæces, and caught by the external ring. This was freed, examined, and reduced. The testis was found at the internal ring, atrophic, misshapen, and showing no evidence of

torsion or other injury. The Bevan operation was performed and the child made a perfect recovery. This teaches the difficulty of excluding a strangulated hernia in these cases, and the folly of expectant treatment as advised by some writers."

These cases very pertinently illustrate conditions with which torsion of the spermatic cord may be confused.

We wish to report one case referred by Dr. J. M. Watson, of Lamont, Okla. A boy 13 years old, who for a week past had been having pain in the left inguinal region. It came on without warning, and upon lying down the discomfort passed off. Suddenly, however, the pain became very severe about the inguinal region and over the lower abdomen. He vomited; was shocked. He was given an anaesthetic and an attempt made to reduce what was supposedly an omental hernia, but the procedure was given up as impossible. He was brought to the hospital with the diagnosis of strangulated omental hernia, which was concurred in. The testicle was well down in the scrotum, but a mass protruded through the external abdominal ring. No impulse on coughing, but a doughy mass was present in the inguinal canal. Making the usual incision down on the canal, upon entering the processus vaginalis, which had not closed except at the internal ring, there was found a bluish mass made up of the twisted cord. The vessels were thrombosed and upon prolonging the incision downward, the testicle was found to be gangrenous. The testicle swung free in the tunica vaginalis testis with no attachment at the lower border. The cord was transfixed and ligated at the internal abdominal ring and the testicle and cord removed. There was marked pouching forward of the peritoneum into the inguinal canal and the usual radical operation for the cure of hernia was performed. Also, had a hernia of the linea alba, two inches above the umbilicus, containing adherent omentum, which was cured at the same time. Incidentally, it is interesting to note that some three years previously we operated this

patient's mother for an umbilical hernia and his father had an inguinal hernia and wore a truss. The fact that he had the hernia in the linea alba confirms the statement that these cases of torsion of the spermatic cord occur practically always in the abnormally developed.

—R—

### Hospital Hints.

J. T. AXTELL, M.D., Newton, Kan.

(Read at meeting of the Kansas Hospital Association, at Topeka, May, 1916.)

Thirty years ago the Axtell Hospital was organized in Newton. It was ready for patients February 1, 1887. We had four rooms for patients. The staff consisted of myself and one partner. We knew enough to put the hospital facing a park, between the depots, and on the highest ground in Newton that was reached by the sewer, and we knew little else about hospitals.

The hospital idea was not popular. A hospital was a place for poor people or for those who had no homes. Even where operations were necessary, our best people preferred to have the work done in their homes. There were few trained nurses in this country, and we depended on practical nurses and relatives of the patient for nursing.

The hospital idea, as you know, has grown until now it is known to be the best place to take care of the sick. Hospitals are not only prepared to take care of the sick in the best way, but they are accustomed to doing so and can do it with the least friction and waste of energy. Think how one sick person in a home will demoralize the whole household and possibly a whole neighborhood in their efforts to nurse and care for the patient, when an additional patient in a hospital will get perfect care without a ripple of excitement.

About each hospital will be grouped the best trained physicians who specialize in their different lines of work, and who, by their training and experience, are the best qualified to make a diagnosis and carry out the treatment, whether medical or surgical. End results can be followed up from rec-



ords and the best methods finally determined.

The meeting together of physicians in hospital diagnosis and treatment stimulates each to further study, more accurate diagnosis and better work. The man who works alone is more likely to get into ruts, does not have his work checked up, and lacks many of the incentives for research and study that hospital physicians have.

From a financial standpoint, hospitals are not and probably should not be any particular success. The poor we have with us always, and they are even more likely to become sick and need hospital care than are those who are better fixed in this world's goods. A physician usually prefers to take care of most of the poor people who appreciate his services rather than send them to the county doctor, but this he can do without much actual expense. He is principally out his time and possibly some medicine. But a hospital who cares for a destitute person must see that he has medical and surgical care, board, clothing, light, heat, baths, medicines, and all the necessary care of trained nurses. This is no little expense, but is something we can scarcely avoid even if we wished to do so. The physician who sends all of his pay patients to a hospital expects, or at least wishes, the hospital to care for any occasional destitute person. Our own experience in prosperous Kansas is that about one person in ten, sent to a hospital, is unable to pay his way. In cities this proportion may be greater. Neighbors, churches and lodges often go together and pay a patient's hospital expenses, and this is right and should be encouraged, and physicians should meet such charity half way.

The popular conception of a hospital is more or less connected with its charity features. Our earliest hospitals were generally controlled by the churches and supported by donations and contributions. It is yet a popular thing for people with few or no relatives to leave part of their substance to hospitals. These endowments and this charity feature make it impossible

to put a hospital on a purely business, dividend-paying basis and compete with other hospitals. About all a hospital can expect to do is to collect enough money from its pay patients for the running expenses of the hospital and to support its charity patients. It is seldom that anything can be saved for rent or dividends and if it could be done, it should go to a fund for more and better buildings and equipment, for hospitals must grow and more and more people in the future will take advantage of hospital facilities than have done in the past. In Germany it is very rare for anyone to remain sick in his own home. The spirit of economy and efficiency, of which we hear so much, takes them to a hospital for better care at less expense.

For years our statutes have provided that institutions used exclusively for charitable and benevolent purposes were not subject to taxation. No hospitals in this country come under that strict letter of the law, as all hospitals receive some pay from some of their patients. The courts, by their rulings, have modified this statute and have repeatedly ruled and have established the principle of law that it is the *use* to which a property is put that determines its liability for taxation, and not the *ownership* of the property. If a church or charity organization owns a piece of property and rents it out to mercantile or other purposes for gain, that property is subject to taxation—while if a private individual or corporation owns a piece of property which is used for a church or any benevolent or charitable purpose, it is not subject to taxation. It is the use and not the ownership which determines the question. The courts have also ruled that organizations receiving pay from some of their patients and whose surplus is used for charity and not for private gain, are charitable and benevolent associations and are not subject to taxation.

In this state at the present time the county clerks are usually the county assessors, and if assessments are made on property which is supposed to be used for



charitable or benevolent purposes, the recourse is to the State Tax Commission. The State Tax Commission has ruled and maintains that the hospitals of Kansas, no matter how owned—whether publicly or privately, who are under the jurisdiction of the State Board of Control, are not subject to taxation. These hospitals are supervised by the State Board of Control, visited by them, and make annual reports of all work done, both charity and otherwise. If the work done, as shown by the report, is satisfactory to the Board of Control, the hospitals are retained and a part of the state's fund for charity is given to the hospital. It is in this way that all the hospitals of Kansas which are not taxed receive their immunity from taxation. It is the theory that the counties should not tax what the state considers charity and helps to maintain. If, however, the county commissioners in the several counties do not accept the decision of the Tax Commission, the Tax Commission, in reference to hospitals, does not assume the office of sheriff and does not attempt to enforce its order. It can rule on the question but does not force the county commissioners to accept its ruling. If the county commissioners refuse to do so, the only recourse of the hospital is through the courts of the state. This question is liable to be tried in the courts at any time and means much to every hospital in the state. When it is tried it certainly will be to the advantage of every hospital to make itself personally interested in the question.

In looking at hospitals from these viewpoints, it would seem to me that every good town of several thousand inhabitants in Kansas could organize and maintain a small hospital, if all of the physicians of the town would get together and work together in harmony for their own good and that of the community. There are always enough citizens with civic pride in a town who will give of their money towards such an organization. One or two physicians cannot support a hospital. Therefore, it is necessary that all shall work together or the enterprise will fail,

but if physicians see their own advantage in the matter, they will work together.

The advantage of laboratory, X-ray apparatus, and other things used in common, being owned together and not by each one separately, is of immense importance.

Specializing in certain lines of work is another important item. For it is by specializing and seeing a large number of cases that certain doctors become proficient in any one line of work, and the best paying patients of a small town will go to larger towns and to physicians who do specialize in their practice. In this way there is a loss to the physicians and to the small town that could be saved if hospitals were built and physicians, by specializing and seeing more cases of a certain kind, became more skillful. If all the doctors of any town should try to be surgeons, or eye specialists, or nerve specialists, or genito-urinary specialists, no one would become so proficient as they could do if the work were divided.

In the organization of these hospitals, it is my belief that they should not be made private corporations. There should be no capital stock issued and no dividends declared. The money that is used to build these hospitals should be donations, and what the hospital may save in its freedom from taxation and the surplus, if it should be fortunate enough to have any, can go to charity and for more and better buildings and better equipment.

—————R—————

### **Carcinoma of the Larynx, With Report of a Caase Operated.**

P. H. OWENS, M.D., Great Bend, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

Mr. Z., age 68 years, American, white, married, engaged in farming and livery business.

Family History — Father died at 70 years; grandfather died of cancer of the lip; mother died at 45 years of age of hemorrhage of the lungs. Brothers, four, two dead. Sisters, none. Children, three, one died when six months old. Wife had two miscarriages.

Previous Illness—Never had any serious illness in his life.

Present Illness—Began about September, 1912; patient began to complain of something in his throat and was constantly trying to clear his throat.

About seven or eight months after patient first began to complain, he noticed his throat began to swell and he complained of pain especially when swallowing. Two months later, after using local applications for some time, the swelling was lanced and a considerable quantity of pus discharged; this was September, 1913. It required about a month for the wound to heal; patient was then treated by a nose and throat man for one month, using local applications inside of throat. For one month more the throat was treated with the violet ray. About this time patient developed considerable difficulty in breathing and always accompanying inspiration there was a loud sound. His difficulty in breathing gradually increased.

In February, 1914, patient came under our observation; it was almost impossible for him to swallow and he could be heard to breathe for some distance. A tracheotomy was done and patient was given immediate relief from his difficulty in breathing.

The diagnosis rested between cancer and syphilis of the larynx. A Wassermann was done and found to be negative. Two injections of Salvarsan were given, however, in the hope that it might be a gumma, followed by injections, in the muscles, of salicylate of mercury.

The treatment was continued till June and apparently there was no improvement. Patient finally could not swallow even liquids. He finally consented to an operation, which was performed June 28, 1914.

All patients with affections of the larynx and likewise affections of any organ of the body seek medical aid because of objective and subjective symptoms, and probably in no condition is the proper analysis of the symptoms more important than in affections of the larynx. This is true because by this method we often first suspicion the

cause of the disease, which we must know if it is to be successfully treated.

It is important to emphasize that cancer of the larynx furnishes the only indications for a complete laryngectomy and that complete laryngectomy, by most authorities, is considered the only treatment for laryngeal cancer.

Knowing also the usefulness and importance of this organ, symptoms of any kind referable to the larynx should immediately cause us to consider all the factors that could here produce disturbance. Most common of these, perhaps, is syphilis, but with a careful history, findings in other parts of the body and a Wassermann Reaction, there should be no confusion. Laryngeal lupus, although uncommon, does occur, but it is often associated with lupus of the nasal cavity and naso-pharynx.

Conditions that produce changes in the voice by interference with the function of the recurrent laryngeal nerve must be borne in mind, such as enlarged thyroid, aneurism of the aorta, or subclavian artery or enlargement of the lymph glands. It is needless to consider further the symptomatology of these possibilities just mentioned. I will therefore take up briefly the symptomatology, diagnosis and operative procedure of cancer of the larynx.

In order to appreciate the symptoms and course of laryngeal cancer it is necessary to understand its two classifications, which are intrinsic and extrinsic. Intrinsic meaning cancer within the laryngeal box; extrinsic when outside the larynx, that is in the epiglottis, arytenoids or other parts.

The objective symptoms of cancer of the larynx are, briefly, tumor mass and enlargement of lymph glands; subjective symptoms are continued hoarseness and difficulty in breathing and swallowing. The objective symptoms vary with the two classifications.

It is known that intrinsic cancer does not metastasize readily and therefore the tumor mass and enlarged glands may be wanting. This slow metastasizing of intrinsic cancer is due to the construction of its lymph supply. Over the true vocal



cords, the most common site of intrinsic cancer, the lymph vessels are poorly developed. The network of lymph vessels is divided into two parts, one above and the other below the true cords. Their distribution is such that in cancer of the larynx the glands most affected are those at the base of the neck and along the posterior border of the sterno-cleido-mastoid muscle.

Upon the early diagnosis depends the success of treatment. It is impossible, therefore, to wait for all symptoms mentioned above, if our results are going to be good. At the first suspicion of such a condition the laryngoscope should be used by cocainizing the larynx. If, by observing the growth, a positive diagnosis cannot be made a piece should be removed by a punch forcep for microscopic examination. It might be well to mention here that the patient should be ready for operation when the piece of tissue is removed as there is liability of exciting activity in growth by this interference. Having decided that we are dealing with a cancerous growth we have still to consider the general condition of the patient before attempting such a radical operation. If the oesophagus has not been involved and the patient has not been suffering from starvation, his general health, as a rule, will be good. Such objections to operating as permanent disability and disfigurement are arguments that should not receive much consideration in the face of so serious a condition for, as Dr. Crile has shown, many of these people continue their work after recovery.

The care of the nose, mouth and throat previous to operation, in order to rid them of any focus of infection, is very important. Special attention should be paid to decayed or infected teeth or nasal discharge. Two weeks before operating our patient the dentist removed eight or ten bad teeth and, at the time of operation, his gums were in healthy condition and the mouth free from infection.

The anesthetic which is most preferable is the combination of general and local

anesthesia. About one hour before operating the patient was given, by rectum, 10 grains of Chlorotone in a solution of olive oil after his bowels had been freely moved by carthartics and washed with saline solution. About thirty minutes after giving the chlorotone, the patient was given six ounces of 70 per cent ether in olive oil. He was placed on the operating table, his head lowered and after the field of operation had been sterilized, the skin was infiltrated with adrenalin and novocaine along a line from the hyoid bone to the tracheotomy opening.

I have already mentioned that the tracheotomy was performed several weeks previous to the operation; this should always be done that sufficient time may be had for adhesions to form around the trachea to hold it fixed in position; this prevents the to-and-fro movement of the trachea which would otherwise take place and increase a liability of infection.

A snug fitting tube was placed in the tracheotomy opening; it was not necessary, however, to administer ether at any time during the operation. The tissues were divided down to the larynx and each layer infiltrated as it was reached.

Special care was exercised in thoroughly anesthesising the mucosa of the trachea before it was divided. This was done to block the terminals of the super laryngeal nerve and prevent changes in respiration and circulation. Having found the esophagus involved, a portion just opposite the larynx was removed; all the lymph gland that it was possible to dissect out we also removed. The upper end of the esophagus was closed with the purse string suture. The flaps of the skin were sutured; closed the wound and a rubber tube was placed transversely through the field of operation. About two hours after completing the operation the patient became conscious and his condition remained good until about 24 hours later when he had a rather profuse hemorrhage from the wound; it was necessary to remove all the sutures and, after clamping and tying the bleeding vessel, I packed the wound with

iodoform gauze. The only other complication noticed was violent fits of coughing. This was attributed to a little of the acid secretion from the upper end of the esophagus trickling into the tracheotomy opening. After closing the esophageal opening more securely the coughing ceased. Other complications, which might be expected, none of which were noticed in this case, are pneumonia, mediastinal abscess, local infection, vagitis, reflex inhibition of the heart and respiration through mechanical stimulation of the superior laryngeal nerve.

Trifacial neuralgia should perhaps be considered as a complication; this developed about four or five months following the operation; this was attributed to the formation of scar tissue about the branches of the trifacial nerves. After the patient had suffered for some time with this condition, I gave him several injections of Fibrolisin both subcutaneous and directly into the scar tissue, which apparently relieved this condition.

Immediately after operating on the neck the stomach was brought through and sutured to the parietal abdominal wall. Forty-eight hours later an opening was made into the stomach and feeding was begun. The patient continued to take his food every three hours during the day and at 12 o'clock during the night. His food consisted principally of milk and eggs, soups and gruels of various kinds. During the day he usually took two to three ounces of brandy or a glass or two of beer. It was necessary at each feeding for him to pour some of the saliva into his stomach, especially if he was using much sugar or starchy foods.

I wish to say in conclusion:

1. The first symptoms exciting suspicion of laryngeal cancer demand prompt and thorough investigation.

2. After positive diagnosis of cancer of the larynx, we should insist upon laryngectomy as soon as possible.

3. The mortality from operation for cancer of larynx is lower than the mortality for operation for cancer in other

parts of the body.

4. Many of the patients continue their work after recovery.

The case just related emphasizes these facts because in spite of the disadvantages such as age, extrinsic form of the cancer and involvement of the esophagus, our patient lived almost a year with no sign of recurring malignancy, finally dying of starvation because of inability of his stomach to care for food.

—R—

### Granuloma Pyogenicum.

A case of granuloma pyogenicum of the lip is reported by R. L. Sutton, Kansas City (Journal A.M.A., May 20, 1916). The disease he says, in spite of its frequency, has attracted very little attention in this country. A brief sketch of its nomenclature is given. The etiologic factor is probably the *Staphylococcus aureus*, perhaps in an unfavorable soil or in an attenuated form. The histologic changes are essentially alike in all forms and, although never malignant, the growths tend to recur unless the base is cauterized. It occurs usually in parts subject to trauma, the hands and feet being favorite sites. In all the patients excision under novocain was practiced, the raw basis sponged dry and then thoroughly and deeply frozen with Pusey carbon-dioxid snow. This is not a direct antiseptic but it causes an artificial hyperemia and its cauterizing action leaves little to be desired in the treatment.

—R—

### Congenital Defects More Prevalent Among Babies of the Rich?

Infant mortality studies made in connection with Baby Week by Dr. W. H. Guilfooy, Register of the Department of Health of New York, indicate that deaths from congenital defects are now more prevalent among babies of the rich than among babies of the poor. This is all the more remarkable since the infant death rate as a whole is much lower among the wealthy classes.—Weekly Bulletin, Dept. of Health.



# THE JOURNAL

of The

## Kansas Medical Society

W. E. McVEY, M.D. - - - - Editor

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### The Wine of Cardui Case.

The "Wine of Cardui Case," to the favorable ending of which we have long looked forward, has finally been decided. The decision is a compromise. It finds the defendants guilty of libel against the manufacturers of Wine of Cardui but gives them judgment for only *one cent*. The suit was originally brought for \$300,000, but the death of the senior member of the manufacturing company eliminated \$200,000 of the amount, which was a claim for personal damages. The remaining \$100,000 was cut in half by the federal judge, so that the suit was ultimately for \$50,000.

It remains yet to be seen if the verdict as rendered will be worth to the manufacturing company the amount expended by them in the trial. It will also be interesting to know how it may be used to their advantage. It was estimated that the trial cost each side more than \$2,000 each day and the trial was in progress fifty-six days.

Those who have been interested in the propaganda for reform being carried on by the American Medical Association have hoped that the verdict in this case would be for the defendants. While the compromise verdict saves the association a considerable additional outlay of money,

the principle at stake is of vastly more importance. The propaganda has been carried on for the benefit of the public and if this decision is to hamper the efforts of the Council on Pharmacy in this direction it is certainly a great misfortune. The verdict is a victory for the American Medical Association in that judgment against them for a large amount of damages has been denied. It is a defeat, however, if the people come to regard the verdict as an endorsement by the courts of the claims made for this preparation.

### Our Membership.

In our next number of the Journal we expect to publish the number of regularly licensed physicians and the number of members of the Kansas Medical Society in each county in the state. The counties will be arranged by districts so that the per cent of membership may be readily determined for each county and each district.

The preparation of this list has required a great deal of time and effort, and is likely to be inaccurate where the secretaries of county societies have failed to make prompt and complete report of members in good standing. Before publication the list will be carefully checked with the Secretary's list, and we would suggest that secretaries of county societies make immediate report to him of all new members and reinstated members not already reported.

Those who have failed to pay dues for the current year are not in good standing and are not entitled to receive the Journal nor can they participate in the benefits of the defense fund in defending a suit for malpractice occurring during the time of suspension.

### The Stormont Library.

As no report of the Stormont Library was submitted at the last meeting of the Society, the following from the State Librarian will, no doubt, be of some interest to the members:

My Dear Doctor:

Soon after the receipt of your letter making inquiry in regard to the Stormont Medical Library, I was taken sick and have not been able to attend to business for several weeks, hence the delay in answering your letter.

Soon after the death of Dr. Stormont his widow, Mrs. Jane C. Stormont, expressed a wish to donate to the State Library a collection of medical books, to be kept separately and named in some appropriate way to distinguish them as a memorial to her deceased husband. By act of the Legislature, approved March 1, 1889, this memorial donation was duly accepted by the state and full provision was made for the reception and care of the books and the investment of the proposed permanent fund which Mrs. Stormont also desired to contribute.

The proposition was that Mrs. Stormont should make a direct purchase of books to the value of \$5,000 to form the nucleus of the Stormont Medical Library which was to be attached to the State Library. These books, to the number of 1,000 or more, were selected by a committee of physicians chosen by Mrs. Stormont and consisting of Drs. Reid Alexander, C. H. Guibor, R. M. Phillips, J. E. Minney and W. L. Schenck.

In addition to this cash purchase of books amounting to \$5,000, Mrs. Stormont, on June 14, 1889, paid to the treasurer of the state the sum of \$5,000 which, under the provisions of the act passed by the Legislature, was invested by the school fund commissioners of the state. This sum has been reinvested by the school commission from time to time for the past twenty-seven years. The fund yields in interest between \$250 and \$300 a year. This interest fund is used to purchase new medical works as they appear and to keep the medical library up to date. While it is not a large sum, it has always enabled the librarian to purchase the better class of medical text books and to keep the medical library fairly well balanced as to authors and topics. The additions to the State Library from year to year have been made

under the direction of the State Medical Society. This society many years ago appointed a committee for the purpose. I presume that most of the members of the original committee have either died or removed from the state, so that the purchases during the past ten years have been made largely under the direction of Dr. C. A. McGuire, of Topeka. The state librarian makes some purchases upon his own responsibility, and has also bought some books upon the recommendation of individual physicians. Some works on administrative medicine have been bought at the instance of Dr. S. J. Crumrine.

There are now in the Stormont Library about 3,200 volumes. This is a big collection of medical books, and would be so considered in any city double the size of Topeka. During the time that the medical school was in operation the Stormont books were made available to the medical students. They have always been available to physicians, although in the beginning the librarian was prohibited from permitting any of the medical books to be taken from the library. This rule has been so changed as to permit of the use of medical books by students and physicians. There is no printed catalogue of the medical collection. We maintain what is known as a card catalogue. This system is very complete, showing titles of the books, authors' names and cross references as to subjects. It is much more valuable than any printed catalogue could be except that it requires a visit to the library by the person who wishes to consult it. A printed catalogue is so soon out of date that I have never favored the idea of going to the expense of compiling and printing a catalogue of this kind.

Something has recently been said in the newspapers to the effect that the Stormont Medical Library was not used. Possibly it is true that the library is not used by physicians as much as it ought to be, but it is a great mistake to say that the library is not generally used. We have calls almost daily for information which can only be obtained in the Stormont Medical



Library. The local physicians make use of the books, although I would be glad if this use was more universal. Physicians throughout the state have also had books sent to them for study and reference. Some of the books have also been loaned to the medical school at Rosedale and the librarian has tried in every way to stimulate an interest in the use of the medical library.

The library now receives the following medical periodicals:

The Lancet.

The Journal of Laboratory and Clinical Medicine.

Surgery, Gynecology and Obstetrics.

The Metabolist.

The American Journal of the Medical Sciences.

The American Journal of Orthopedic Surgery.

Annals of Surgery.

Archives of Pediatrics.

Index Medicus.

The Journal of the Kansas Medical Society.

The Medical Council.

The St. Paul Medical Journal (not bound).

The Journal of the American Medical Association.

I will be glad to give you any further information at any time and trust that this will answer the purpose indicated in your letter. Very truly yours,

J. L. KING,  
State Librarian.

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A notice from the W. B. Saunders Co. states that a fraudulent solicitor, collecting money for subscriptions to medical journals and books is in the field. He has a good story to tell and also has a variety of names. It is always a good plan, if you do not know the salesman, to make your checks payable to the firm.

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Dr. Paul Paquin, city health director in Kansas City, Mo., died on June 23 after a lingering illness from tubercular meningitis. Dr. Paquin was widely known

through his long and valuable service in the fight against tuberculosis. Many years ago, while practicing in St. Louis, an anti-tubercular serum was manufactured under his direction. At a later date he was for a time physician in charge of a sanatorium at Excelsior Springs.

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Dr. Thos. Kirkpatrick died at his home in Garnett, Kansas, June 11. Dr. Kirkpatrick was born in 1859, was a graduate of the Illinois University Medical College in the year 1883. He had practiced medicine in Garnett for many years. He was, for a term, secretary of the State Board of Health.

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Dr. M. M. Smith of Dallas, Texas, writes that he will convert the Texas Medical News, which he has published for many years, into a national organ to be known as "Medical Life Insurance and Health Conservation." The new publications will be conducted along the lines of ethics adopted by the state journals and accept only such advertisements as meet the approval of the American Medical Association.

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We have a few dozen lapel buttons—official badges of the Kansas Medical Society—that may be had by members of the society at twenty-five cents each, while they last.—Journal, Kansas Medical Society.

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Of the 196 medical journals which accept advertisements, only 38 maintain ethical standards, and furnish sworn statements of circulation. Twenty-eight of these are official State Medical Journals. It is a matter worthy of comment that the journals which are controlled by large bodies of medical men have almost universally adopted the ethical standards and accept only such advertisements as are known to be reliable, and only the advertisements of such drugs as have been approved by the Council on Pharmacy of the A.M.A.

William Cullen, early in the eighteenth century, reported the apparent value of mustard seed as a laxative. It was given in tablespoonful doses. E. C. Van Leersom has recently reported some experiments made for the purpose of determining the cause of this laxative effect. (Jr. Phar. & Exp. Therap. June, 1916). He found that a considerable quantity of hydrogen sulphide was formed, and this gas is a strong stimulus of intestinal movements. He believes that the laxative action of white mustard seed is due to the formation of hydrogen sulphide rather than to the mucus.

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A statement from Ed. T. Hackney, which appeared in the Topeka Capital, July 11, indicates that the loss of the strong men from the faculty of the university is not due to the fact that the Board of Administration is unwilling to meet the salaries offered by other schools. In this statement Mr. Hackney says that the Board is ready to meet any such advances. This is a very pleasing statement to those who have feared for the possible loss of some of the best men on the faculty of the medical school.

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## SOCIETY NOTES.

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### STAFFORD COUNTY SOCIETY.

The Stafford County Medical Society held its regular meeting at Stafford, Kan., May 14, 1916, with Dr. Cyrus Wesley, president, presiding. Eleven of the eighteen members being present. Two interesting papers were presented, Treatment of Typhoid Fever by Dr. L. E. Mock, of St. John, and Acute Gastritis by Dr. H. H. Minor, of Macksville. The papers received thorough discussion and much favorable comment by the members.

Members present: Drs. M. M. Hart, H. H. Minor, Macksville; L. E. Mock, J. T. Scott, St. John; Cyrus Wesley, J. N. Rose, F. W. Tretbar, F. F. Lemoce, J. J. Tretbar, J. A. H. Webb, J. C. Butler, Stafford.

J. A. WEBB,  
Secretary.

### MORRIS COUNTY SOCIETY.

The Morris County Society met in Council Grove June 20 at 8 o'clock in the evening. The following program had been prepared:

"Gall-stones," by Dr. Arthur J. Lewis.

"Placenta Praevia," by Herbert Randles.

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### GOLDEN BELT SOCIETY.

The regular quarterly meeting of the Golden Belt Medical Society was held in Wamego July 6. The following program was prepared for this meeting:

Afternoon Session 3 p. m.—Commercial Club Rooms.

"Syphilis," Dr. William K. Trimble, Kansas City, Mo.

"Differential Diagnosis between Acute Conjunctivitis, Iritis and Glaucoma, with remarks on Treatment," Joseph S. Lichtenberg, Kansas City, Mo.

"The Thyroid Internal Secretions," Dr. P. J. O'Connell, Salina.

"Tonsilectomy During Infection," Dr. J. R. Mathews, Manhattan.

Dinner at Park hotel, 6:30 p. m.

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## BOOKS.

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### The Practical Medicine Series.

Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Price of series, \$10. The Year Book Publishing Co., 327 So. LaSalle St., Chicago, Ill.

Vol. II—General Surgery: Edited by John B. Murphy, A.M., M.D., LL.D., F.R.C.S. England (Hon.), F.A.C.S. Professor of Surgery in the Northwestern University; Attending Surgeon and Chief of Staff of Mercy Hospital and Columbus Hospital; Consulting Surgeon to Cook County Hospital and Alexian Brothers Hospital, Chicago. Price of this volume, \$2. Price of the series of ten volumes, \$10.

Please note that the present volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume being complete on the subject of which it treats for the year prior to its publication.

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### The Medical Clinics of Chicago.

The Medical Clinics of Chicago. Volume I, No. VI (May, 1916). Octavo of 220 pages, 67 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.



The first article in this number is on the Allen Treatment of Diabetes, by Dr. Walter W. Hamburger of Cook County Hospital. Another very interesting article in this number is by Richard J. Tivnen, M.D., of Mercy Hospital, on "The Relation of the Upper Respiratory Tract to Metastatic Infection." Dr. J. C. Friedman, of Michael Reese Hospital, contributes an article on "Chronic Pain in the Right Iliac Fossa." Dr. Ralph G. Hamill contributes an article on "Traumatic Neuroses."

These are but a few of the articles which appear in this number of the Clinics, but they will give one a fair idea of its general contents.

#### A Manual of Practical Nursing.

By Helen Lillian Bridge, B.S., R.N., Washington University Training School for Nurses. Published by C. V. Mosby Co., St. Louis, Mo. Price, \$1.

This little book was prepared for the instruction of the nurses in attendance at the hospitals connected with the training school. It is a detailed description of the routine used by the various services of these hospitals. In general it may be applied to the service of any well conducted hospital. The directions given are explicit and will no doubt be of very material aid to any nurse.

#### Surgical and Gynecological Nursing.

By Edward Mason Parker, M.D., F.A.C.S., Surgeon to Providence Hospital, Washington, D. C., and Scott Dudley Breckenridge, M.D., F.A.C.S., Gynecologist to Providence Hospital, Washington, D. C. Published by J. B. Lippincott Co., Philadelphia. Price, \$2.50.

The efforts of the authors of this text have been to present to the student and graduate nurse a practical statement of the procedures in her professional work that fall within the realms of general surgery and gynecology.

In Part I is described the cells of the body and invading cells, sources and modes of infection and infection of wounds. Part II is devoted to surgical pathology, surgical and gynecological nomenclature, and the surgical field.

Under various heads the practical information which the nurse requires is given in very simple and definite terms.

Excellent illustrations help to make clear many of the procedures described. A considerable space is given to the description and illustration of the various instruments that may be required.

#### International Clinics—Volume II of the Twenty-six Series.

A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia, with the collaboration of Chas. H. Mayo, M.D. Published by J. B. Lippincott Co., Philadelphia and London.

Among the interesting articles appearing in this volume of the International Clinics we note one on "The Indications for Venesection" by E. J. G. Beardsley, M.D., Assistant Professor of Clinical Medicine, Jefferson Medical College; one on "Auricular Fibrillation" by G. Canby Robinson, M.D., from the Washington University Medical School; one on "Immobility of the Diaphragm" by John H. Pryor, M.D., Buffalo, N. Y.

Dr. John M. Swan, of Rochester, presents an analysis of fifty cases of dysthyroidism. We have mentioned only a few of the many very interesting subjects discussed in this volume, but those who are at all familiar with the International Clinics need no suggestions.

#### The Clinics of John B. Murphy, M.D.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume V, No. III (May, 1916). Octavo of 176 pages, 32 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.

Of particular interest in this number of the Murphy Clinics is a group of gall-bladder cases with clinical histories and descriptions of the operations. Then follows a clinic on pyloric obstruction, a clinic on ulcer of duodenum and jejunum, a case of obturation ileus and three cases of post-operative ventral hernia.

There is also shown a case of carcinoma of peritoneum disseminating probably from rupture of adenocarcinomatous ovarian cyst in which an exploratory operation was done. This case is illustrated with colored plates showing the carcinomatous condition.

Other clinics are reported, among them two cases of carcinoma of the rectum, four cases of extrauterine pregnancy, and a case of sarcoma of right kidney.

#### Gynecology.

By William P. Graves, M.D., F.A.C.S., Professor of Gynecology at Harvard Medical School. Octavo volume of 770 pages with 424 original illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$7 net; half morocco, \$8.50 net.

This is a complete work on the general subject of Gynecology and is intended for both a text-book and a reference book.

Part I deals with the physiology of the pelvic organs and with the relationship of gynecology to the general organism.

Part II includes a description of the diseases which are essentially gynecologic. These descriptions are carefully illustrated with drawings from microscopic sections.

Part III is concerned entirely with the technic of gynecologic surgery and those surgical devices which have found greatest favor in the experience of the author are particularly described.

The book is well written and is abundantly illustrated wherever illustrations may serve the reader in making the subject clear.

1915 Collected Papers of The Mayo Clinic, Rochester, Minn.

1915 Collected Papers of The Mayo Clinic, Rochester, Minn. Octavo of 983 pages, 286 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6 net; half morocco, \$7.50 net.

One is first impressed with the aspect of permanency in the makeup of this book—the high grade of paper, the excellently prepared and carefully printed illustrations, and the durable binding. These things suggest permanency—a book that shall be not only read but put away for future reference. In the first section, cases in which various parts of the alimentary canal are involved are discussed. The second section is devoted to the study of cases in which urogenital organs are involved. Then there is a section on the ductless glands. In this section are two very interesting papers concerning the Iodin compound occurring in the thyroid.

The fourth section contains a variety of clinics involving the head, trunk, and extremities. This is followed by some descriptions of the technic of some of the procedures in use at the clinic. The last two hundred pages contain general papers on a considerable variety of subjects.

## MISCELLANEOUS.

### New and Nonofficial Remedies.

Enteric Coated Glycotauro Tablets.—Each tablet contains glycotauro 2 grains and is coated with salol. Hynson, Westcott & Co., Baltimore, Md.

Petroagar.—Each 100 gm. contains petrolatum 72 gm., agar 22 gm. with powdered licorice, cocoa and oil of anise sufficient to flavor. H. C. Merker Co., Chicago, Ill.

Petrobran.—Each 100 gm. contains petrolatum 74 gm., bran 22 gm. with powdered licorice and "oil of pineapple" (ethyl butyrate) sufficient to flavor. H. C. Merker Co., Chicago, Ill. (Jour. A.M.A., June 10, 1916, p. 1857.)

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### Propaganda for Reform.

Vaccine Treatment.—Hektoen (Jour. A. M.A., May 20, 1916, p. 1591) traces the stages by which vaccines, which were first employed with attempted scientific control, have come into indiscriminate and unrestrained use, with no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares. Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced. As clearly shown by Hektoen, "the simple fact is that we have no reliable evidence to show that vaccines as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of



successful and rational therapeutics." (Jour. A.M.A., May 20, 1916, p. 1625.)

English Prescriptions.—Bernhard Fantus, professor of pharmacology and therapeutics, University of Illinois School of Medicine, favors the abandonment of the so-called "Latin" prescription. He holds that the usual arguments in favor of the "Latin" prescription are fallacious and points out the advantages of the use of English. He concludes: "By far the most important reason for writing prescriptions in English lies in the difficulty medical students have in learning the Latin form. To the student prescription writing is a bugbear. When one thinks of the crowded medical curriculum and the comparatively small number of hours set aside for pharmacology and therapeutics, it seems a pity to waste any of it on the acquiring of an antiquated form of expression." In regard to the claim that Latin prescriptions guard a patient from knowledge which might be prejudicial, he replies: "Inasmuch as it is the popular opinion that doctors use Latin in prescription writing to keep the laity in ignorance for selfish ends, it seems high time that we antagonize this idea; and we can do this most emphatically by using English. This we can also do with perfect safety, for secrecy is very rarely, if ever, essential in the practice of the up-to-date physician, who generally prefers to take his patient into his confidence than to keep him in ignorance. Deception is not practiced by the true physician. Therein lies the special difference between the quack and the honest medical man." (Jour. A.M.A., May 27, 1916, p. 1696.)

Ichthyol.—The American agent for ichthyol—the sole importer—announces that his supply of ichthyol is exhausted. As fraudulent substitutes are offered for sale, this state of affairs should be known to physicians. (Jour. A.M.A., May 27, 1916, p. 1734.)

Nonspecific Treatment of Disease.—Evidence is accumulating that certain therapeutic effects ascribed to specific treatment with vaccines or serums, have

been due to nonspecific effects produced by these preparations. Jobling and Peterson (Jour. A.M.A., June 3, 1916, p. 1734) review the evidence along these lines. They conclude that too much reliance has been given to the idea of specificity and that we have refused to consider evidence of nonspecific therapeutic results. We should, however, not cast aside all ideas of specificity in disease, a conception which has been the foundation of vaccine therapy. Miller and Lusk (Jour. A.M.A., June 3, 1916, p. 1756) in a paper dealing with one phase of nonspecific therapy, report improvement in cases suffering from arthritis following intravenous injection of typhoid vaccine. It would be of interest to know how permanent the improvement was and in how many cases the cause of the arthritis was found and removed. Also, we must bear in mind the query of Theobald Smith: How much energy does a reaction of this sort cost the patient, and is the final result worth the cost? (Jour. A.M.A., June 3, 1916, p. 1784.)

A Case of Beta-Eucain Poisoning.—T. G. Orr, Kansas City, Mo., reports a case of beta-eucain poisoning. Toxic symptoms appeared after an operation in which 3 ounces of a 0.25 per cent beta-eucain hydrochloride was used for the local anesthesia. After the toxic symptoms have completely disappeared, the patient died suddenly five days later. Necropsy showed an embolus in the left coronary artery. (Jour. A.M.A., June 10, 1916, p. 1857.)

Efficiency and Nontoxicity of "Arsenobenzol."—Udo J. Wile, Ann Arbor, Mich., reports that during the last six months 612 injections of "Arsenobenzol" from the Philadelphia Polyclinic have been administered at the University of Michigan Hospital. Wile concludes that the immediate therapeutic results from the use of Arsenobenzol are fully as good as those following the use of Salvarsan and that, given with proper precaution, the drug has shown itself fully as little toxic as Salvarsan. The conclusions refer to intraspinal medication as well as to intravenous. (Jour. A.M.A., June 10, 1916, p. 1880.)

### Poverty and Tuberculosis.

Poverty and tuberculosis — tuberculosis and poverty! These are the essential facts which force themselves to the attention of every investigator who faces the problem of that disease. The tenement house district of Cincinnati yields a tuberculosis morbidity just three times as great as the areas where better housing prevails. In 197 families in which tuberculosis existed the average monthly income for a family of four was approximately \$57. After paying the pro rata share for food and rent, a balance of \$5.13 remained for each individual to meet all other expenses. Such a low subsistence level works like black magic in the spread of tuberculosis. Moreover, and this is a point over which the public should ponder, the home of the average wage earner was found to be far less sanitary than the average factory and workshop. In regard to all the factors which make for healthful living, ventilation, sufficient light, proper temperature, and freedom from overcrowding, the score was in favor of the factory in nearly every instance.

The City of Cincinnati realized that her tuberculosis death rate was 50 per cent above the average and that it had failed to manifest a tendency to decline. She felt no qualms in making this admission. Rather, she determined that she would learn why, with an efficient health department and favorable climatic influence, she was suffering from twice the mortality from that disease as her neighbor, Pittsburgh. Accordingly the United States Public Health Service was requested to make a thorough study of the situation and submit a report. To show that something more than mere academic interest obtained, 19,932 workers in 154 factories of the city voluntarily submitted to a physical examination.

The conclusions reached, point directly to the close connection between poverty and tuberculosis. The great factor underlying the entire problem was seemingly that of economic conditions. One-sixth of all tuberculous cases came from cheap

lodging houses. Alcoholism was a prominent cause, and often accelerated the course of the disease. Occupational hazards and bad working conditions were apparently responsible for about 20 per cent of the cases, but in the majority of instances these hazards were not necessarily inherent in the occupation. Previous tuberculosis in the family occurred in practically a third of all the cases investigated. Dissipation, overcrowding, bad housing, and innate lack of personal responsibility, were also listed as causes.

An interesting feature of the report, and one which has not previously been dwelt upon in studies of this character, relates to the effect of immigration and the rate of growth of the population of a city upon the tuberculosis death rate. It is shown that cities with a population composed largely of racial stock having a limited resistance to tuberculosis are subject to a high mortality rate from that disease, while centers having a slow rate of population increase are likewise subject to a high tuberculosis rate. The evidence is submitted in a comparative table covering sixteen American cities. Almost without exception those with a high percentage of Irish, Scandinavian and German stock, and those in which the negro population is relatively large, have a correspondingly high mortality, while those where the Italian and Jewish element is proportionately great have a low tuberculosis death rate. Similarly, such cities as Detroit and Cleveland, with high rates of population increase, show a low tuberculosis mortality, while Cincinnati and Baltimore with a relatively small population increase have a high tuberculosis rate. Doubtless the true explanation of this discrepancy is that advanced by the authors, namely, that where the population increase is rapid new buildings are erected to take the place of old insanitary structures and better housing conditions prevail.



### Health Insurance.

In response to public interest in health insurance the Massachusetts Legislature has created a commission to study social insurance with special reference to sickness. The state department of health and the bureau of statistics are directed to co-operate with the commission of nine members which will prepare a report and recommend the form of legislation to be introduced in January, 1917. California has a similar state commission already at work on this problem which is attracting wide attention since the introduction this year of bills for health insurance in Massachusetts, New York and New Jersey. Proponents of this legislation believe it will bring about a movement for "health first" comparable to the safety first campaign which followed workmen's compensation for accidents.—From American Association for Labor Legislation, 131 East Twenty-third Street, New York City.

### Examination of Medical Corps of the Navy

The next examination for appointment in the Medical Corps of the navy will be held on or about August 7, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps, and embraces the following subjects: (a) Anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the Naval Medical School, which will begin on or about October 1, 1916. During this course he receives a salary of \$2,000 per annum, with allowances for quarters, heat, and light, and at the end of the course, if he success-

fully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

### The National Board of Medical Examiners of the United States.

The need of a standard medical examining body for the whole United States and its territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a voluntary board, the members of which are selected from the medical corps of the army, the navy, and the public health service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States.

The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which by the co-operation of the individual Boards of Medical Examiners, the recipients of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine.

The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition.

The independent action by the Board is furthered by the financial and moral support of the Carnegie Foundation.

The original Board consisted of fifteen members, as follows, and remains unchanged, except for the loss of the founder and secretary, Dr. Rodman, who died on March 8, 1916. At a meeting June 13, 1916, Dr. W. L. Bierring, of Des Moines, Iowa, was elected to the Board.

Surgeon-General W. C. Braisted, U. S. N., president.

Dr. W. L. Rodman, secretary.

Colonel Louis A. LaGarde, U. S. A., Ret., treasurer.

Surgeon-General W. C. Gorgas, U. S. A.

Surgeon-General Rupert Blue, U. S. P. H. S.

Medical Director E. R. Stitt, U. S. N.

Assistant Surgeon-General W. C. Rucker, U. S. P. H. S.

Dr. Herbert Harlan, Federation of State Medical Examining Boards.

Dr. Isadore Dyer, New Orleans, La.

Dr. Victor C. Vaughan, Ann Arbor, Mich.

Dr. Henry Sewall, Denver, Col.

Dr. Louis B. Wilson, Rochester, Minn.

Dr. E. Wyllys Andrews, Chicago, Ill.

Dr. Horace D. Arnold, Boston, Mass.

Dr. Austin Flint, New York, N. Y.

The permanent organization of the Board will consist of the three Surgeon-Generals and one other representative from each of the Government Medical Services, three representatives of the Federation of State Medical Examining Boards, and six members chosen at large from the medical profession by the National Board of Medical Examiners.

The official domicile of the Board is Washington, District of Columbia.

#### REQUIREMENTS.

*Requirements for Admission to the Examination:*

Satisfactory completion of

(a) *High School.* A four-year high school course.

(b) *College.* Two years of acceptable college work, including physics, chemistry, biology, and a modern language.

(c) *Medical School.* Graduation from a Class "A" medical school. (American Medical Association classification.)

(d) *Hospital Training.* One year as interne in an acceptable hospital or laboratory.

The above requirements apply to graduates of medical schools in 1912 and thereafter. The Board may accept equivalent credentials in the case of graduates previous to 1912.

#### EXAMINATIONS.

The Board has been given spacious

rooms in the Army Medical Museum for conducting its examinations. They will be conducted primarily by members of the Board, and will be written oral, and practical, including the examination of cases. In addition to the written examinations held in the Army Medical Museum, oral, written, and laboratory examinations will be held also in the Army and Navy Medical Schools, and in the Hygienic Laboratory of the Public Health Services, these facilities, as well as the government hospitals wherein will be held clinical examinations, having been placed at the disposal of the Board for the purpose.

Credentials must be presented to the Board sufficiently early for investigation. If adequate time is not allowed for this purpose, credentials may be rejected.

The following subjects will be included:

1. *Anatomy:* Microscopic—Embryology; Histology and Organology; Neurology. Gross—Osteology; Dissection. Applied—Regional, Topographical, Surgical.

2. *Physiology:*

3. *Chemistry and Physics:* Organic. Physiological. Physics.

4. *Pathology and Bacteriology:* Bacteriology. Microscopic Pathology. Gross Pathology. Surgical Pathology.

5. *Materia Medica, Pharmacology and Therapeutics:* Materia Medica. Pharmacology. Therapeutics and Prescription Writing. Electrotherapeutics, including Radiotherapy.

6. *Medicine:* Theory and Practice. Physical Diagnosis. Laboratory Diagnosis. Diseases of Nervous System, including Psychiatry. Diseases of Children. Tropical Medicine.

7. *Surgery:* General, including Minor Surgery. Operative Surgery. Special Surgery—Ear, Nose and Throat; Eye; Genito-urinary; Orthopedics; Radiology; Skin Diseases; Syphilis and Venereal Diseases.

8. *Obstetrics and Gynecology.*

9. *Hygiene and Sanitation:* Sanitary Science; Epidemiology. Vital Statistics. State Medicine.

10. *Medical Jurisprudence.*



## SUBJECT VALUES.

1. Anatomy . . . . .	100
2. Physiology . . . . .	75
3. Chemistry and Physics . . . . .	75
4. Pathology and Bacteriology . . . . .	100
5. Materia Medica, Pharmacology, and Therapeutics . . . . .	75
6. Medicine . . . . .	200
7. Surgery . . . . .	200
8. Obstetrics and Gynecology . . . . .	100
9. Hygiene and Sanitation . . . . .	50
10. Medical Jurisprudence . . . . .	25
Total . . . . .	1000

Passing grade is an average of 75 per cent.

A candidate receiving a mark below 50 per cent in one subject or below 65 per cent in two subjects, fails.

Candidates failing at the first examination may register for a second examination at the end of one year. A third examination will not be allowed.

It is expected that the examination will cover about one week.

No fee is charged for the examination itself, but a registration fee of five dollars will be required.

The first examination will be held in Washington, beginning October 16, 1916.

## CERTIFICATION.

Candidates who have been successful in passing the examination and are approved by the Board, will be granted certificates.

*This certificate is not a license to practice medicine*, nor does it exempt the holders thereof from complying with the legal requirements of the states in which they desire to practice; but it will be evidence of high attainment in medical knowledge; and will, the Board believes, soon be acceptable by State Boards as evidence of qualification for licensure.

Further information and application blanks may be obtained from the secretary, Dr. J. S. Rodman, 2106 Walnut St., Philadelphia, Pa.

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We have a few dozen lapel buttons—official badges of the Kansas Medical Society—that may be had by members of

of the society at twenty-five cents each, while they last.—Journal, Kansas Medical Society.

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### Treatment of Hay Fever With Pollen Vaccines.

It is a well-known fact that certain individuals, on account of a natural susceptibility, become sensitized to the pollens of various plants, when they later come in contact with these pollens, they experience the distressing symptoms to which the name "hay fever" is usually applied. The attempt to desensitize these individuals by administering subcutaneously extracts of the pollens to which they are sensitive has met with such success that it is now recognized as the only effective means of relieving this condition.

Hay fever is prevalent at two seasons of the year, namely, spring and fall. A variety of pollens may produce hay fever, but it is a generally accepted fact that in America "spring" hay fever is due in the majority of cases to pollens from the Gramineae. "Autumnal" hay fever on the other hand, is due principally to the pollens of ragweed, goldenrod and maize.

This is the season of the year when vaccination against autumnal hay fever should be begun. Hay Fever Vaccine "Fall" Mulford contains the protein extract from the pollens of ragweed, goldenrod and maize, dissolved in physiological saline solution, and accurately standardized, and may be used without preliminary diagnostic tests.

The injections at first may be given at about five-day intervals, the intervals being shortened or lengthened, according to indications. Ophthalmic and skin tests are not considered necessary in the control of dosage. It is sufficient to start with a small dose and increase gradually until satisfactory results are obtained.

There are no contraindications to the therapeutic or prophylactic use of Hay Fever Vaccine Mulford so far as known. A small percentage of patients may be hypersensitive to the protein extracts, in

which case the dose may be accordingly reduced.

A complete "Working Bulletin" on Hay Fever Vaccine has been issued by the H. K. Mulford Company of Philadelphia, and contains valuable information regarding the treatment of this troublesome malady. It can be obtained from the company on request.

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### A Valuable New Catalogue.

Parke, Davis & Co. announce the publication of their 1916 price list, which is said to be an improvement in many respects over any previous issue of this valuable catalogue. The book is divided into three parts: Part 1—Fluid Extracts, Pills, Elizirs, Syrups, Tablets, etc.; Part 2—Specialties, into which have been merged Special Preparations; Part 3—Biological Products. The nomenclature of the U. S. P., ninth revision, has been adopted in the new list, the term "milliliter" ("mil") being substituted for the cumbersome "cubic centimeter." The standards of the new U. S. P. applying to fluid, solid and powdered extracts and tinctures, together with the doses, have also been adopted. All Harrison-act items (products that must be ordered on official order forms) are clearly distinguished. Its amplitude, its handy classification, its comprehensive general index, all serve to make the new catalogue a reference book of the utmost value to medical practitioners. We understand that the book will be ready for distribution about August 1. Physicians are advised to write for a copy, addressing their requests to Parke, Davis & Co., Detroit, Mich.

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### Adrenalin in Hay Fever.

Many able therapeutists aver that the best method of treating hay fever is by prophylaxis. The contention is not without substantial foundation, since it is in consonance with the modern trend of preventive medication. Unfortunately, the physician not uncommonly lacks opportunity for the application of prophylactic

measures. In a majority of cases the disease has already manifested itself when his services are sought. The situation then calls for prompt, effective treatment. Application of the suprarenal substance in the form of Adrenalin Chloride Solution or Adrenalin Inhalant is undoubtedly a wise procedure at this juncture. One feels justified in saying this in view of the long, efficient service that has been rendered by these agents in the treatment of hay fever.

While not specifics in the strictest sense, the Adrenalin solutions control the hay-fever symptoms effectively and secure for the patient a marked degree of comfort. By reason of their astringent property, they constrict the capillaries, arrest the nasal discharge, minimize cough, headache and other reflex symptoms, and hasten the resumption of natural breathing.

For topical use in the treatment of hay fever Adrenalin Chloride Solution should first be diluted with four or five times its volume of physiologic salt solution; Adrenalin Inhalant should be diluted with three to four times its volume of olive oil. The solutions are applied in spray form to the nares and pharynx. Any good atomizer adapted to the use of oily or aqueous substances is suited to the purpose.

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### Bronchia Asthma.

In a preliminary report, Sverre Oftedal, N. D. (Journal A.M.A., May 27, 1916), gives the results of his study so far of the etiology and pathology of bronchial asthma. It has become evident, he says, that the phenomena observed in an attack of bronchial asthma are fundamentally due to a chronic spasm of the bronchial musculature, but just what the cause of the spasm is, is still a matter of conjecture. Recently Babcock has reported the finding of a fusiform anaerobic bacillus in the sputum of asthmatic patients which he regards as possibly specific. There were present, however, other organisms, notably the pneumococcus, *Streptococcus hemolyticus* and *Streptococcus viridans*. Further evidence of the



bacterial origin of the disease is suggested by the large percentage of associated lesions, especially in the nasal passage, which strongly suggest a primary focus of infection and the removal of which has often caused marked improvement. These facts suggested to Oftedal the possibility of the reproduction of the disease in lower animals by intravenous injection of cultures from the sputum of asthmatic patients along the lines of technic carried out by Rosenow and his associates. Three cases were selected representing different types and stages of the disease to furnish the material for the cultures. No attempt was made to isolate any special organism, but great pains were taken by gargling and repeated washing of the sputum in sterile salt solution to avoid mouth contamination. The cultures were made in ascites-dextrose-bouillon and the twenty-four hour cultures centrifuged and injected in varying amounts intravenously. Of the twenty-one animals injected, all except three showed typical lung lesions. One of the three died a few hours after injection with an overwhelming septicemia. The rest lived until chloroformed from two days to two weeks later. While most seemed to feel fairly well and take nourishment, a distinct difference was invariably observed in the manner of breathing as compared with control animals. It was slow and intensely labored, and some of the animals appeared to suffer from air hunger. The lungs were found to be greatly distended, usually grayish and very light. The microscope showed marked distention of the alveoli and thinning and frequently rupture of the alveoli walls. A very marked change was seen in the bronchioles, which were contracted as if in spasm, the mucosa being thrown into folds almost obliterating the lumen. In the substance of the musculature of the muscle a considerable number of streptococci were found, and in the animals injected from the sputum of Case 3 the sputum culture was largely composed of a short plump polar-staining bacillus with very few streptococci, while tissue cultures of

the lungs made two days after injection showed a pure culture of the streptococcus, and these were also found in the muscles as in the other animals. Cultures were made of the blood and other body fluids and also of several viscera other than the lungs in order to disprove the possibility of a generalized bacteremia. In nearly every case the blood and all organs except the lungs were found to be sterile.

### — I — **Umbilical Dyspepsia.**

Congenital defect of the abdominal wall at the naval is, according to C. D. Aaron, Detroit (*Journal A.M.A.*, May 13, 1916), a rather common occurrence. Only when there is protrusion do we regard it as a hernia which, however, may be produced in these cases by anything causing increased abdominal pressure. This umbilical opening may be very small and escape notice. It is always congenital. All these patients have symptoms of nervous dyspepsia due to increased irritability of the autonomic nervous system. They may be free from the symptoms for days and have them recur from some trivial cause. The appetite is apt to be capricious. Fulness of the head, headache, vertigo, lassitude, and depression may be complained of, as well as uneasy sensations one or two hours after meals or a heavy feeling immediately after eating. The patient is usually constipated but the nutrition is good, though loss of weight may result from voluntary refusal of food. Palpation with the ball of the finger over the umbilicus causes severe pain which may radiate in different directions or be referred to some distant part of the abdomen. The stomach may functionate normally, but hyperacidity is sometimes present and chemical examination of stomach contents shows hyperacidity in all cases. The principal idea of treatment is to eliminate irritation of the patent umbilicus. The following directions are given by Aaron: "This is best accomplished by bringing the edges of this congenital opening as close together as possible with adhesive plaster 2 inches

wide and long enough to extend from  $2\frac{1}{2}$  to 4 inches on either side of the umbilical opening. The surface of the abdomen where this is to be applied is thoroughly cleansed with soap, water and alcohol. One must be particularly careful that the umbilicus itself is well cleansed. If there is an excessive growth of hair on the abdomen, it is shaved off with a safety razor. I have found this instrument much more satisfactory than the ordinary razor. The first piece of adhesive is applied in the following manner: The edges of the navel are approximated by an assistant, and the strip of adhesive is applied directly over the umbilicus and drawn as tightly as possible. Without an assistant the binding can be done by applying the adhesive to one side of the abdomen and then pressing with the hand on the opposite side, and fastening the other end of the plaster to this side. The puckering of the skin in the middle is smoothed away. The remaining two strips of plaster are fastened so as to overlap the central strip above and below. In this manner we have been able to give almost immediate relief from pain and the distressing symptoms. The patient is able to take his bath in the same manner to which he has been accustomed, as the adhesive is very resistant to the action of water. Its removal when loose is facilitated by the use of ether or oil of wintergreen. This treatment is usually continued from four to ten weeks. On removal of the adhesive, one will often find vesicles and sometimes pustules in the area which has been covered. A single application of tincture of iodine over this area will go far toward clearing up these eruptions. If necessary, application of the adhesive may be discontinued for several days at a time." These eruptions usually yield to tincture of iodine. An elastic abdominal support is a valuable adjunct to the treatment.

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**Painful Back.**

W. E. Shackleton, Chicago (Journal A. M. A., May 20, 1916), discusses some of the surgical aspects of painful backs, a

condition more common than is generally supposed and a potent factor in the causation of sciatica, scoliosis and backache in patients who have been treated medically for lumbago, rheumatism, and sciatica without relief, as well as surgically for cord tumors and Pott's disease and supposed pelvic and abdominal conditions and tumors of the cord. The cause of the pain and disability in these cases is an anatomic variation in the size or shape of the transverse process of the fifth lumbar vertebra, sometimes spoken of as the lumbar rib, which occurs about as often as other anatomic variations. In the majority of cases the conditions are undoubtedly acquired during years of hard labor in unnatural postures and they are more common in middle adult life and among the male sex, though cases have been reported in patients of an early age. Occupation, while a frequent cause, is not the only one. Fractures and syphilitic growths are also probably to be considered as sharing in its etiology. The pain is not always produced in the same way. It may be caused by impingement of the process on the ilium and the transverse process may act as a fulcrum separating the sacrolumbar joints. In one case of Adams, it was due to the result of constant friction eroding the ilium. The anatomical details in regard to the course and distribution of the fifth lumbar nerve are described. Shakelton has found but twenty cases reported in the literature and adds three, two of them already operated on and the other one still under observation. The results of operation were most gratifying.

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**Recurrent Herpes.**

A case of recurrent herpes simplex, so-called because it accompanied no infectious disease, was due to no known toxin and was not zoster, is reported by Frank Cohen, New York (Journal A. M. A., May 20, 1916). The case is of interest because of its recurrence over a period of two years, the isolation of the causative organism, a streptococcus, and its cure by an



autogenous vaccine obtained from subcultures of this organism. It therefore adds to the evidence of the infectious origin of herpes simplex and is another step in the direction of showing the common etiology of all herpes.

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### Anaphylaxis in Gonorrhea.

Allergy as a therapeutic agent in the treatment of gonorrheal complications is the subject of an article by L. D. Smith, Chicago (Journal A.M.A., June 3, 1916). While working with antigonococcic serum in the treatment of complications of gonorrhea, his attention was attracted to the fact that the individuals who were markedly affected by the anaphylaxis were the ones who responded best to the treatment. The more severe the allergic manifestations, such as temperature, urticaria, joint pains, etc., the better the results. Again no marked effect was noticeable until these manifestations appeared and in their absence no effect on the disease, subjective or objective, was obtained. Looking back at his records, it was evident that the same conditions had obtained previously. To prove that other factors than specific antibacterial serum played an important if not the most important part was easy. Normal horse serum was substituted for the antigonococcus serum and equally good results were obtained. To place the experiment on the same basis throughout, all the serums used were obtained from the same firm. Eleven cases altogether are reported, and the summary of them discloses the fact that normal horse serum can entirely replace the antigonococcic serum, the specific bactericidal properties of which are questionable. As a matter of fact, the recent work by Warden makes it appear doubtful whether any antigonococcic properties exist in the so-called specific serum, since in reality merely the metabolic products of the readily autolyzed gonococcus are injected into the horse in the preparation of the specific serum. To what factor the beneficial results of normal horse serum can be credited cannot be definitely stated, but

that allergic phenomena play a role seems evident, since the best results were obtained at the time of the onset of serum sickness, and the greater the reaction the better the results.

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### Sodium Citrate Injections.

A. L. Garbat, New York (Journal A.M.A., May 13, 1916), has experimented to determine whether or not the use of sodium citrate in transfusions is harmful. He reports four experiments of intravenous injection of a 2 per cent solution of sodium citrate in distilled water which lead him to conclude that sodium citrate per se is not harmful, even if repeatedly injected over a long period of time and that the sodium citrate method of transfusion cannot be considered in any way dangerous. He has found that an 0.25 per cent solution of sodium citrate has been more reliable in preventing coagulation than the smaller amounts sometimes used.

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### Hydrosalpinx.

H. J. Whiteacre, Tacoma, Wash. (Journal A.M.A., May 20, 1916), reports two cases of hydrosalpinx with twisted pedicle, a condition which he thinks has received too little consideration by the textbooks as compared with a like condition in cases of ovarian cyst. Both of these patients suffered the sudden, severe seizure as is characteristic of twisted pedicle of a cyst, and in each instance a complete twist of the broad ligament was found beneath a tremendously dilated fallopian tube which contained blood. They would more correctly have been styled hematosalpinx and the history of the cases showed that the lesion occurred in a manner quite analogous to the ovarian cyst twist and that the effusion of blood into the tube was secondary and the direct result of the circulatory disturbance caused by the twist.

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We have a few dozen lapel buttons—official badges of the Kansas Medical Society—that may be had by members of the society at twenty-five cents each.—Journal, Kansas Medical Society.

### Antiseptic Action of Ether in Peritoneal Infections.

Following the lead of French surgeons, John Saliba (Journal A.M.A., April 22, 1916) has obtained gratifying results from the injection of ether into the infected peritoneal cavity. It has proved quite safe and has demonstrated clinically and experimentally to have a bactericidal action. The dose for a child four years old and over is one ounce; for an adult three ounces, instilled into the peritoneal cavity just before its final closure. No untoward effects follow in the majority of cases. Evaporation and absorption are rapid and ether begins to be excreted in the breath in about three minutes after its peritoneal injection. In only two cases out of 248 was there any evidence of serious after effects which could have been attributed to the ether.

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Many empiric methods, abandoned as irrational, have been revived and rehabilitated with basic scientific facts.

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# THE JOURNAL

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### Advantage of Transverse Incision in Appendicitis.

J. D. WILSON, M.D., Emporia, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

It is difficult to prepare a paper on a subject so common to all and yet deviate from the general purpose as prescribed by nearly all authors and text books and taught in every medical school. A surgeon who defies some of these rules and teachings, especially when satisfactory results have attended his labor, is somewhat bold, and subject to criticism should he undertake methods decidedly out of the general order.

The transverse incision in appendix cases, I therefore state, is not in general use, except in some localities where more pleasing results have attended the surgeons who use it than was wont to follow in the ordinary muscle splitting, or McBurney incision, and it will be my humble effort to show, in brief outline, why it should be more generally used than it is.

It will not be necessary for me to recite the minute anatomy of the belly wall, of which we are all acquainted, only as I use the different layers to illustrate the advantage of the transverse incision.

In the first place it is frequently essential that we have a large opening, especially in chronic cases with many adhesions, and also in women who have had ovary or tubular trouble which we wish to explore.

Every surgeon who has done plastic surgery in the region of the ovary and tubes, has found it takes a large incision

to do quick and proper work. In the median incision every inch of exposure at the lower end requires at least two inches in the incision upwards. With the transverse incision this is not so. The tension is not so great, and less trauma is caused in the downward traction than in the side. Therefore, we avoid a considerable amount of injury to the tissues of the abdominal wall, and any injury not produced by a sharp cutting instrument will have a tendency to retard healing, which is not desirable.

Second.—The blood supply from which we get our healing is furnished by blood vessels running generally in the direction with the median line and when severed, unite only by sending out smaller vessels in an anastomosis. That brings us to consider the rapidity of the healing of the wound. For example, let us say we have an incision two and one-half inches long, running in the same direction as the blood vessels, and when we insert our stitches in closing we have destroyed the circulation for at least the distance of our incision; then it will require an anastomosis of blood vessels two and one-half inches long to re-establish perfectly the blood supply. With the transverse incision the ends of the several blood vessels are again practically back in apposition, at least only the distance intervening across the incision, instead of the length of it.

The next point to be considered is the prevention of a post operative hernia. The anterior sheath of the recti muscles is the most important structure on which the strength of the abdominal wall depends,

and the lower fourth of this sheath is made of the aponeurosis of the external oblique, internal oblique and the transversalis muscles. This sheath is cut at right angles when a longitudinal incision is made.

Dr. Coffee states as a result of quite extensive experiments that in fat subjects the line of traction of the fatty masses is directly away from the line of incision, that the tendency of the three pairs of lateral muscles is to contract in the lateral direction on either side. If there is post operative vomiting in which the intra abdominal pressure, as well as the lateral contraction of the three pairs of muscles, exerts a combined and constant pressure on the wound, a pressure anemia results. The danger is much greater in very fat people, when drainage becomes necessary, or a secondary infection of the tissues of the abdominal wall takes place. Many modifications of the transverse incision have been made, but the principle remains the same.

Herselgrave recites his experiences with the transverse incision, claiming that, even if the rectus muscle is cut, the pain is less severe on account of the absence of the spasm of the recti and subsequent healing of the muscle is perfect.

It has been often stated that a transverse section of muscle with subsequent suture will not weaken the muscle.

In as much as the posterior sheath of the rectus and the peritoneum are very elastic, it is possible in nearly all cases to retract the muscle inward, so as to expose the right iliac fossa and thus get a clear field. This will be a great help in case we find numerous adhesions or the appendix bound down to the peritoneum and surrounding structures. Care must be taken not to injure the deep epigastric vessels.

On account of the elasticity in the sheath of the rectus and the peritoneum, this kind of an incision will also enable us to reach the gall bladder in most cases for a superficial examination.

Coffee was the first to use the trans-

verse fascia incision for exploration and without hernia resulting. Chas. Mayo has used this incision for superpubic cystotomy for ten years without a single hernia, and Judd in his article on "Prevention and Treatment of Ventral Hernia," calls attention to this fact.

Chas. Mayo lays great stress on the importance of not injuring the fibers of the rectus muscle while detaching it from its sheath, thus not destroying the fine blood vessels.

#### TECHNIC.

A straight transverse skin incision is made about one inch below the middle of a line drawn from the interior sup. spine of the ileum and the navel, and carried down through the superficial and deep fascia, until the fibers of the rectus muscle are exposed. The rectus muscle is thus stripped carefully from its bed toward the median line. The posterior sheath is then cut through transversely about one inch lower than the incision through the upper layer.

It is important that the stripping be done with some blunt instrument so as not to injure the muscle fibers. No blood will be lost and the fine network of blood vessels will not be destroyed. This is very important in the future process of regeneration and healing.

If the blood supply is taken away, then subsequent healing will have to depend upon the tissue fluids, in which it is bathed. If the work of stripping the muscle is done carefully, there will be no torn edges, or raw surfaces. As soon as the underlying fascia is cut the peritoneum is opened in the usual manner by a transverse incision and the cavity explored or work to be done accomplished. In closing the wound the layers are sutured with whip stitch or in the usual manner. The rectus muscle falls back in its natural bed at right angles to the incision in the fascias, thus absolutely preventing the possibility of a hernia, with the blood supply intact. Then I use about three deep Figure Eight silk worm gut sutures, to obliterate any pockets or dead space, and the



skin is closed with Mitchell's metal clamps, which are removed the third or fourth day. The deep silk worm gut sutures are left until the seventh or eighth day, depending upon the thickness of the abdominal wall and general appearance of the wound.

My patients are allowed to turn on either side after twenty-four hours, and have never experienced any unpleasant results, nor have I had any post operative hernia even in pus cases where drainage was instituted.

**SUMMARY:** Now, since we find that there is less trauma to the tissues, and since there is less disturbance to the blood supply, and the structures are returned more nearly to their natural position, and since we have not split any muscles leaving weak spots in their continuity, and by virtue of these conditions there is only the remotest chance for the occurrence of a hernia, we feel that these are at least points to be taken into consideration in favor of the transverse incision over the longitudinal or muscle splitting incision.

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### **Malignant Tumors of the Ovaries.—**

#### **Report of Cases.**

R. S. HAURY, M.D., Newton.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

Malignant tumors of the ovaries occur quite frequently, and in great varieties. Statistics on the frequency of these tumors differ very much.

Olshausen states that 15 per cent of all ovarian tumors are malignant; Shroeder, 16 per cent; Fritsch, 18 per cent; Leopold, 23 per cent; Kelly, 8 per cent; Freund, 21 per cent; Werder, 25.3 per cent; the Pennsylvania Hospital, 15.8 per cent. These figures include the primary and secondary malignant growths. The forms that may occur are hypernephroma, endothelioma, sarcoma, carcinoma, and adenocarcinoma. Ovarian carcinoma are either primary or metastatic. In both forms the absence of prominent symptoms is a marked feature, other than those caused by the intra-abdominal tension brought about by the tumor and the accompanying ascites.

Clinically there is frequently nothing to suggest malignancy for a long time. They are more common after forty, but may occur in some form at all ages. In cases of carcinoma, evidence of previous pathological but benign changes have been found in most specimens. In the early stages the capsule is firm and smooth; later when the cells proliferate into it, and penetrate the capsule, it becomes friable and rough. The carcinomatous growth is usually found in the thickened portion of the cyst wall. The epithelial cells are derived from the lining of the follicles and the cells derived from the germinal epithelium. Metastatic growths from primary carcinoma of the ovary depend largely upon the integrity of the capsule. Recurrence is probable and the mortality is high.

In metastatic cancer the primary lesion may be in the stomach, breast, intestines, gall-bladder and its ducts, pancreas, adrenal bodies, in fact in any of the abdominal organs. Bland Sutton has frequently called attention to the metastatic tumors in the ovary. Schlagenhauser collected and described a series of seventy-nine cases associated with primary cancer of the viscera. In sixty-one of these cases the primary tumor was in the stomach, ten in the intestines, seven in the gall bladder and ducts, and one in the adrenal glands. The majority of these patients were operated, and at the time of the operation the surgeon was of the opinion that the ovarian lesion was the primary growth, and in most of the cases the primary growth was overlooked, until after a fatal termination of the patient. From his researches Schlagenhauser concludes that the majority of bilateral solid tumors of the ovaries are carcinomata and metastatic, and that the history of these ovarian tumors vary with the nature and the situation of the primary growth.

Endothelioma is a tumor originating in the endothelium. They simulate morphologically the atypical epithelial tumors and histogenetically the atypical connective tissue tumors. The ability of the endothelial cells to undergo metamorphosis simulating

the epithelial type at one place and the connective tissue type at another has led to endless confusion in the differentiation and classification. Hence we have endothelial sarcoma, alveolar sarcoma, angiosarcoma, etc. Unfortunately we cannot always observe the early stages in the development of these tumors, but must depend on interpreting the processes by histologic examinations. Embryologically the endothelial tumors belong strictly to the connective tissue group, but endothelium stands midway between epithelial and connective tissue cells. This flat epithelium may give rise to cylindrical cells resembling epithelium, or may form spindle cells, or appear as fibro-blastic elements. They differ from the ordinary connective tissue cells by their ability to secrete mucin and hyalin. Like connective tissue cells they produce granulation tissue and epithelioid giant cells. They may form tubules lined with a layer of cylindrical cells like epithelium. Clinically endotheliomata are malignant and are exceptionally prone to recur at the seat of operation much earlier than sarcoma or carcinoma, and the growth usually is very rapid. They may occur at any age.

The ovary has long been regarded as a common site for the occurrence of primary malignant neoplasms, but until the beginning of the present century little attention has been given to the possibility of frequent secondary deposits in this organ, except as they appeared to be part of a general metastasis in the terminal period of the disease. In the American literature there appears to be a scarcity of evidence that either pathologists or surgeons have accepted the newer conclusions which have been expressed in quite an extensive foreign literature on this question of secondary growths in the ovaries. While some difference of opinion existed, prior to 1900, metastatic carcinoma of the ovaries was in general considered to be of little pathological and clinical importance. Rokitsky, Billroth, Birch-Hirschfeld, Olshausen, Zahn, all were very modest in their statements in regard to metastatic

carcinoma of the ovary, holding to the opinion that carcinoma frequently occurred in the ovary, but that it was rarely the seat of a metastatic growth.

Leopold, however, noted the frequent association of malignant disease of the stomach with that of the ovaries without commenting upon their causal relationship. During the last decade of the nineteenth century a group of German writers pointed out the ease with which metastasis may occur through the peritoneal lymphatics without giving gross evidence of their existence. Among this group of pathologists were Schimmelbusch, Bucher, Walter, Gerhard, Virchow. There appeared during this period a number of reports of cases in which ovarian tumors, diagnosed as sarcoma and endothelioma, were associated with carcinoma of other organs. Bode, for example, presents a case of double sarcoma of the ovaries, which areas also had an endotheliomatous structure, and appeared after an operation for pyloric cancer. Fleischman also reports the findings of a cancer of the pylorus at autopsy four days after an operation for the removal of both ovaries for bilateral fibro-sarcoma.

Temmesvary reported an autopsy in which he discovered a fibro-sarcoma of the ovaries associated with a carcinoma of the stomach, peritoneum and retro-peritoneal glands. Loverich reported a case of ovarian sarcoma associated with a gelatinous carcinoma of the rectum. Krunkenberg provoked new interest in metastatic cancer of the ovaries by reporting and describing his findings in five cases, which he called fibro-sarcoma mucocelulare (carcinomatodes). He states that these tumors appear always to be bilateral, and usually associated with ascites. The growth in this case involved the entire structure of the ovary, formed large tumors and preserved the entire structure of the ovaries. They were in the main solid tumors, firm on the outside, less firm on the inside, and often finding hard and soft areas interchangeably throughout the substance of the tumor; many of these areas being



myxomatous in nature. The surface may at times be distinctly lobulated. The dense areas show histologically an excessive spindle cell growth of the ovarian stroma, justifying the diagnosis of fibrosarcoma. In other less dense areas, due apparently to a mucoid degeneration, the stroma consists of a fine fibrillary meshwork, shading off into a distinctly myxomatous structure. Throughout the different areas are large epithelial-like cells, in large or small groups, sometimes arranged in single or double rows like a scirrhous carcinoma. In the myxomatous areas they may present an arrangement of larger alveoli. The cells differ widely in size and shape. In many cases the large cells appear like epithelial cells, but no connection can be discovered between these cells and the normal epithelial elements in the ovary. Krunkenberg believes the different forms of these cells appear to be simply transitional stages of mucoid degeneration of the stroma cells. Because of the extensive metastasis in his first case, and particularly because of the similar character of the cells which he found distending the lymphatic vessels throughout the body, he is not definitely certain they are not carcinomata.

*Routes of Metastasis:* The transmission of cancer from organs or tissues to distant parts of the body still presents one of the important problems of cancer research. Retrograde transportation through the lymphatic vessels is accepted by most authorities as the probable route in the vast majority of cases. From a carcinoma of the stomach, for example, it can be demonstrated that there is a continuous course of lymphatic invasion through the lymphatic vessels and nodes behind the stomach and pancreas into the retroperitoneal lymphatics along both sides of the aorta, to the enlarged lumbar nodes, from which, through a reverse current in the spermatic lymph vessels, the cells are transported into the ovaries through the hilum. This route is shown to be the only probable one in many cases in which no peritoneal implantations are discoverable.

Peritoneal transplantation, as a route for the dissemination of cancer among the abdominal organs, was first suggested by Virchow, who said that from a primary growth of the stomach which has reached the serous layer, multiple peritoneal nodes may be engrafted upon distant parts, particularly in the region of the pelvic pouches.

Mrs. E. W. R. entered the hospital March 30, 1916, age 35. Has three children. The youngest is three years old. One grandfather died of a cancer of the face at the age of seventy years. In April, 1914, this patient had a double ovariectomy for malignant tumors of both ovaries. Prior to this time the patient states that, had it not been for the fact that she had noticed an unusual swelling in the lower part of her abdomen, she would not have had any occasion to consult a physician, there being at that time no other symptoms that attracted her attention. Patient did well for about one year after this operation, when she observed a rather firm lump at the lower end of the abdominal wound. At the time of her second operation, March 31, 1916, there were in all four tumors in the abdominal wall about the size of a hen's egg, two of these on the scar and the other two about one inch lateral to the old scar. These tumors were excised and upon entering the abdomen a good deal of colored ascitic fluid was found in the pelvis. Furthermore a large number of metastatic nodules were discovered upon the parietal and visceral pelvic peritoneum and a few upon the small bowel low down in the abdomen. The patient was dismissed from the hospital on April 21, feeling very fine. However, about two weeks after the operation there appeared in the stool at two different times a moderate amount of blood. The remarkable clinical feature in this case, as in many others of ovarian tumors, is the pronounced absence of subjective symptoms, referable to the pelvis or abdomen.

*Microscopic Findings:* Practically the entire sections are extremely cellular. Under low magnification appears to consist

of closely packed epithelial cells. The arrangement of these cells is typically alveolar. With higher magnification the walls of the alveoli appear quite thin. The alveoli themselves vary in size considerably. There is every evidence that the growth is rapid as shown by the bizarre forms of the nuclei. The center of some of the loculi contain some disintegrated epithelii and colloid substance.

Mrs. D. H. Age 58. Has been in bad health for more than a year. At the time of entering the hospital was anaemic and cachectic. Abdomen enlarged on account of a large tumor in the pelvis on the right side and extending high up in the abdomen. Ascitis demonstrable before operation.

*Operative Findings:* A large cystic tumor of the right ovary with thickened and dense wall surrounding the loculi of the cyst. The tumor was firmly adherent to the parietal and visceral peritoneum, especially to some loops of the small intestines. A large mass of the omentum also firmly attached to the mass. Upon freeing the tumor the raw surfaces bled freely. A great deal of blood-stained fluid in the pelvis and abdominal cavity.

*Microscopic Findings:* Small round cell sarcoma involving almost the entire wall structure of the cyst. Relatively a small amount of fibrous tissue intermingled with the large number of malignant round cells. Very few blood vessels to be seen in the areas where the round cells are found. There seems to be no alveolar or columnar arrangement of cell masses. Some detritus and blood corpuscles are in evidence in some areas of the tumor which shows the malignant change.

This patient did not overcome the shock of the operation.

Mrs. J. P. W. entered the hospital February 23, 1916. Age, 39. Has four children. The youngest is nine months old. For more than a year the patient has felt a slight soreness in the right ovarian region. After the last confinement she ran a course of fever lasting about two weeks. Soon after the birth of the last child she

detected a lump in her right side about two inches above Poupart's ligament. This induced her to call on the doctor. This growth she states had been gradually getting larger from the time she noticed it until the date of her operation on February 24, 1916.

*Physical Findings:* Tumor of firm consistency and distinctly nodular, palpable above the right Poupart's ligament. This tumor is rather firmly adherent to the surrounding parts. Same tumor can be felt upon vaginal examination. Uterus somewhat enlarged and not very mobile.

*Operative Findings:* Tumor of the right ovary, firm and nodular on the surface with dense and softer areas alternating deeper in the substance of the tumor. All the tissues in the pelvis on the right side are very vascular and friable with very dense adhesions of the ovary to loops of the small intestines, omentum and parietal pelvic peritoneum. Some darkly colored fluid in the pelvic pouches. The mesenteric glands low down enlarged and very firm to the touch. Both ovaries and tubes were excised. Up to the time of writing this paper patient is feeling fine.

*Microscopic Findings:* Multiple abscesses in evidence in many areas. Very many young fibrous tissue cells. Some large epithelial cells of the polyhedral type and also endothelial cells scattered throughout the specimen. In many of these large cells the cytoplasm is very pale but in many of them the nucleus is very large and deeply stained. There is no tendency to any alveolar or columnar arrangement of these cells. In this specimen we leave the question open whether these large cells which may be malignant, developed before the abscesses formed or whether this change has taken place after the formation of the abscesses.

Mrs. I. G. Age 31. Gave birth to four children. The youngest is four years old. One miscarriage before the birth of the last child and two abortions within the last three years. Patient has not been well for about three years. Pain in region of adnexae on left side. Irregular



and painful menstruation. Backache. Uterus is enlarged and some tenderness in region of left ovary. Uterus slightly fixed on this side, but no enlargement upon physical examination.

*Operation:* Complete hysterectomy and excision of both tubes and ovaries.

*Operative Findings:* Uterus very much larger than normal. A tumor the size of a good sized walnut in the left ovary with some adhesions to this ovary. A small amount of ascitic fluid in the pelvis. No gross pathological findings in the gastrointestinal tract or the gall bladder or liver at the time of the laparotomy.

*Microscopic Findings:* Sections from this tumor present columns of epithelial cells suggesting the structure of the fascicular zones of the adrenal bodies. The cells contain a relatively large well stained nucleus and a rather pale appearance of the cytoplasm. Many of these cells have bursted, giving the picture of soap bubbles, the nucleus and cytoplasm having escaped from the cells. The fibrous tissue stroma presents some blood vessels, but not as many as some reported cases of hypernephroma of the ovary.

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#### Biennial Report of the Medical Department of Kansas State Penitentiary.

PHILIP B. MATZ, M.D., Prison Physician.

J. K. Coddington, Warden, Kansas State Penitentiary.

Sir.—I have the honor to submit to you the report of the Medical Department for the biennium 1914-1916. In so doing I desire to state that the statistical figures date from November 16, 1915, to June 30,

1916, inclusive, except the mortality report, which is for the whole biennium.

To begin with, I desire to emphasize the important features of this report; the data gathered from November 16, 1915, to June 30, 1916, show the following summary:

Twenty-one per cent of the men admitted to the penitentiary are affected with syphilis.

Of 201 prisoners examined, seventy-three per cent give a history of having had gonorrhea one or more times and nine had an acute attack when admitted.

The records of the medical department show that 189 cases were treated there, an average daily hospital admittance of less than one case.

The records of the surgical ward show that 181 cases were treated, and that 124 major and minor operations were performed with but a single death.

There is just one case of pulmonary tuberculosis in the prison.

The dental department is self supporting.

A pathological and bacteriological laboratory has been established and scientific work is being done.

The mortality for the biennium has been the lowest in the history of the penitentiary.

The hospital kitchen has been remodeled and the meals served are better and cheaper than ever before, the average cost being seven and one-half cents per meal.

The general health of the men is good. The ventilating facilities of the individual cells are poor and the cell houses are in bad sanitary condition; they should be rebuilt at once.

In going over the records of the men admitted to the penitentiary, it has struck me very forcibly that there must be something, either in their mental or physical make-up, which tends to criminal proclivities. I do not wish to say that environment is not partially responsible for criminal tendencies—not at all—many a man steals because he cannot find work. Such a man is a criminal by accident. I have in mind, however, the chronic malefactor, the recidivist, as penologists call him, the

fellow who is in prison all the time—what do we find is the matter with him? In the majority of cases he is not well balanced mentally and is in poor health physically. Most of the recidivists lack education, lack in will power, and are unable to cope with conditions of the world, except the artificial world behind prison walls with its strict discipline.

When I was appointed prison physician, I had certain definite ideas as to my duties at the prison, and as to my relation with these men and women confined therein. I assumed that they were sent to prison more for reformative than for punitive purposes. I looked upon the work of reformation as a reparative process, by which not only the moral side of the individual was to be made over, but his health was to be restored to normality; that defective, abnormal conditions, physical and mental, were to be so treated that the individual could go ahead and cultivate a sound mind in a sound body.

My plan was, therefore, to examine every prisoner admitted to the penitentiary and ascertain the status of his health; if he had an operative defect to suggest that he submit to an operation, and if he required medical attention, to treat him accordingly. This method has worked out with uniform success. The routine examination of each prisoner admitted includes a Wassermann test of the blood where there is a history of syphilis or any suspicious signs or symptoms of this disease. This brings me to the question of syphilis.

#### SYPHILIS.

My statistics show that of 201 men admitted, 53, or 21 per cent, are syphilitic. This is rather a serious state of affairs and is a menace to the other inmates. Unfortunately, the supply of Salvarsan is limited, and we have been unable to treat all the cases as energetically as we desired; nevertheless, we have administered 25 Salvarsans intravenously, and have treated the others with mercury injections. Care is taken so that the danger of communicating the disease to other men

is minimized, and those with primary or secondary manifestations are isolated. Individual drinking cups have been given all the syphilitics. This disease will be combated more strenuously after July 1, as soon as appropriations are available for the purchase of Salvarsan.

My method of treating syphilis is to give intravenous injections of Salvarsan of 0.1 gram to be followed by intramuscular injections of ten drops of a 10 per cent mercury salicylate emulsion; these to be administered each week for at least a year, and the treatment to be controlled by the Wassermann test once a month to ascertain the progress of each case.

#### GONORRHEA.

The next question studied was that of gonorrhea. This disease is one of the greatest evils of society. It is said that 90 per cent of all operations on married women can be traced to a gonorrheal infection.

At the Kansas State Penitentiary, out of 201 prisoners admitted since November 16, 1915, 147, or 73 per cent, give a history of having had the disease one or more times, and nine had an acute attack upon admission. While there is little danger of the disease spreading, nevertheless, it is my aim to eradicate it here, so that the men, when released, will not be a menace to society.

#### TUBERCULOSIS.

I am very happy to say that at the present time there is only one case of pulmonary tuberculosis at the Kansas State Penitentiary. Since last November, I have encountered but four cases, two women, United States prisoners who have been transferred, and two men, state prisoners, one of whom has been paroled. The Kansas State Penitentiary has been called a breeding place for phthisis, not only by outsiders, but by a former official who had the temerity to say that 35 per cent of the population of the institution was afflicted with pulmonary tuberculosis, a most absurd and slanderous statement to make. Where this official got his statistics and how he made his deduction I am



at a loss to know.

I desire to emphasize the need of a tuberculosis cottage for the treatment of tuberculars. From time to time phthisical prisoners are admitted to the penitentiary. They should be isolated for the protection of others. They ought not to be treated in the wards with other patients, neither should they be allowed to sleep in the prison cells. I have discarded tuberculin both as an aid in diagnosis and for therapeutic purposes. I have not found it satisfactory. Physical examination of the suspected case, together with frequent examinations of the sputum, give more reliable results. In the treatment of tuberculars, I have found forced feeding, fresh air, sunshine and rest more effective in curing tuberculosis than tuberculin.

#### MEDICAL WARD.

The following table will show the number of cases treated since last November and their diagnoses. The average daily hospital admittance was less than one case. This ward has been under the direct supervision of Prisoner No. 5339, whose efforts have been untiring and whose work has been most satisfactory.

*Table No. 1.*

Disease	Number
Abscess. . . . .	3
Appendicitis. . . . .	4
Asthma, bronchial . . . . .	2
Asthma, cardiac . . . . .	1
Bronchitis, acute . . . . .	4
Burns. . . . .	5
Cerebral Embolism . . . . .	1
Cerebral syphilis . . . . .	1
Comedo. . . . .	1
Conjunctivitis. . . . .	4
Constipation. . . . .	20
Cystitis. . . . .	7
Dermatitis. . . . .	2
Dysentery. . . . .	4
Endocarditis . . . . .	4
Epididymitis . . . . .	1
Epilepsy. . . . .	1
Furunculosis. . . . .	2
Gastritis. . . . .	10
Goiter. . . . .	1
La Grippe . . . . .	20
Lumbago. . . . .	2
Malaria . . . . .	1
Mitral insufficiency . . . . .	2
Morphinism. . . . .	1
Myocardial degeneration . . . . .	1
Neuralgia, facial . . . . .	1
Orchitis, acute . . . . .	1
Prostatitis. . . . .	1
Parenchymatous nephritis . . . . .	2
Pleurisy . . . . .	4
Pharyngitis. . . . .	2

Pediculosis corporis . . . . .	1
Pneumonia . . . . .	3
Renal calculi. . . . .	1
Rheumatism, acute . . . . .	8
Syphilis. . . . .	2
Tabes Dorsalis . . . . .	1
Tuberculosis. . . . .	1
Tinea sycosis . . . . .	1
Gonorrhea . . . . .	2
Herpes Zoster . . . . .	1
Hodgkin's disease . . . . .	1
Intestinal indigestion . . . . .	11
Intestinal obstruction . . . . .	1
Tonsillitis. . . . .	6
Typhoid. . . . .	1
Urticaria . . . . .	1
Vesical fistula. . . . .	1
Surgical convalescents . . . . .	27

Total number of cases treated in medical ward  
since November 16, 1915 . . . . . 189

#### SURGICAL WARD.

This is the most important ward of the hospital, and I respectfully suggest that it be moved to where the medical ward is at present. I also urge that another operating room be installed and fitted. At the present time, both infected and clean cases are operated on in the small operating room adjoining Ward Two, this is contrary to all rules of asepsis and aseptic surgery. Table Number Two shows the number of cases treated in this ward and their diagnoses. Table Number Three gives a list of operations performed since November 16, 1915. I desire to call your attention to the fact that just one death occurred, due to ulcerative endocarditis complicating a herniotomy. This patient was on the road to recovery when he suddenly contracted an acute inflammation of the endocardium. I point with a great deal of pride to the results obtained in this department. The ward has been under the direct supervision of Prisoner No. 5120, who has been doing most excellent work.

*Table No. 2.*

Surgical Cases	Number
Abscess of knee . . . . .	1
Abscess, tuberculous . . . . .	1
Amputation of finger . . . . .	1
Appendicitis. . . . .	9
Adhesions following appendectomies . . . . .	3
Burns, second degree . . . . .	2
Fracture of tibia and fibula. . . . .	1
Fracture of neck of femur. . . . .	1
Fracture of radius . . . . .	2
Gastric lavage . . . . .	7
Hematoma. . . . .	1
Concussion of brain . . . . .	1
Cystoscopies. . . . .	4
Correction of deformed finger . . . . .	2

Correction of deformed foot .....	1
Circumcisions. ....	17
Dislocated vertebra .....	1
Dislocated shoulder .....	1
Excision of epithelioma of eye.....	1
Excision of epithelioma of lip.....	1
Excision of metacarpal bone.....	1
Fistula in ano .....	2
Fibroma. ....	1
Fracture of pharynx. ....	3
Fracture of tibia. ....	1
Fracture of wrist. ....	1
Fracture of clavicle. ....	1
Fracture of metatarsal bone. ....	3
Fracture of thumb. ....	1
Fracture of ankle. ....	1
Hemorrhoids. ....	14
Hernia. ....	3
Hydrocele. ....	4
Incised wounds .....	23
Intestinal obstruction .....	1
Irrigation of bladder .....	6
Lumbar punctures .....	6
Mastoiditis. ....	1
Removal of bunions .....	2
Removal of metal plate from old fracture of leg. ....	1
Removal of cyst of neck .....	1
Removal of bullets .....	2
Removal of ingrown toenails .....	2
Removal of polyp .....	1
Resection of rib .....	1
Strictures dilated .....	6
Salvarsan injections .....	25
Thyroidectomy. ....	1
Tonsillitis. ....	4
Varicocele. ....	4
Varicose veins .....	1

Total number of cases treated in surgical ward. 181

*Table No. 3.*

Operations For	Number
Abscess of knee .....	1
Abscess, tuberculous .....	1
Amputation of finger .....	1
Appendectomies. ....	9
Adhesions following appendectomies .....	3
Cystoscopies. ....	3
Correction of deformed finger .....	2
Correction of deformed foot.....	1
Circumcisions. ....	17
Excision of epithelioma of eye .....	1
Excision of epithelioma of lip.....	1
Excision of fibroma .....	1
Excision of metacarpal bone .....	1
Fistula in ano .....	2
Hemorrhoids. ....	14
Hydrocele. ....	4
Hematoma. ....	1
Hernia, inguinal .....	1
Hernia, ventral .....	2
Intestinal obstruction .....	1
Lumbar punctures .....	6
Mastoid, radical .....	1
Removal of bunions .....	2
Removal of metal plate from old fracture of leg. ....	1
Removal of cyst of neck .....	1
Removal of bullets .....	2
Removal of ingrown toenails .....	2
Removal of polyp .....	1
Resection of rib .....	1
Strictures dilated .....	6
Salvarsan injections .....	25
Thyroidectomy. ....	1
Tonsillectomies. ....	3
Varicocele. ....	4

Varicose veins .....	1
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Total number of operations performed in the surgical ward ..... 124

#### DENTAL DEPARTMENT.

The work in this department is being done by Prisoner No. 2318, who deserves a great deal of credit for what he has accomplished. Prisoners who are financially able, pay for their dental work, and those who are not get it done gratis. Right here I wish to recommend that the state furnish each prisoner with tooth powder and a tooth brush upon admission, and the prisoners should be instructed to brush their teeth daily. Good teeth are conducive to good health and normal digestion. Table Number Four shows the work done since November 16, 1915.

*Table No. 4.*

Character of Work	Number
Amalgam fillings .....	125
Extractions. ....	209
Gold bridges .....	27
Gold crowns .....	87
Gold fillings .....	15
Plates. ....	9
Treatments. ....	813

#### DRUG DEPARTMENT.

This department of the hospital is being conducted both efficiently and economically. Instead of buying drugs and hospital supplies twice a year, I am making purchases only when supplies are needed, thereby being sure that drugs are fresh and not making a storage room of the drug department. I am very glad to say that as a result of an over-supply of certain drugs, I was able to sell these at a profit and purchase much needed surgical and laboratory supplies. Where it is possible, I am discontinuing the purchase of tablets and pills and am having the druggist make them in the dispensary. This will mean quite a saving. The druggist in charge of this department is Prisoner No. 2841, who is one of the ablest men on my staff.

#### PATHOLOGICAL LABORATORY.

This is the first time in the history of the Kansas State Penitentiary that the hospital can boast of a fairly well equipped pathological and bacteriological laboratory. It is here that the Wassermann tests are



done, also daily blood, urine, tissue and other scientific examinations are made. It is the busiest department of the hospital and the results here are of inestimable value both in the diagnosis and in the treatment of hospital cases. Table Number Five shows the amount of work accomplished since November 16, 1915.

Table No. 5.

Character of Work	Number
Abderhalden test .....	1
Autogenous vaccines made .....	3
Blood smears for malaria .....	13
Testing of disinfectants .....	4
Cultural examinations of pus .....	7
Chemical tests of spots on clothes for tincture of iodine .....	3
Differential leukocyte counts .....	42
Diazo reactions .....	4
Examination of throat exudates .....	18
Gastric analysis .....	8
Examination of spinal fluid .....	7
Milk examinations .....	4
Microscopical examinations of spots on clothes for blood .....	4
Microscopical examinations of spots on clothes for spermatozoa .....	2
Pus smears .....	21
Sputum examinations for tubercle bacilli .....	69
Total leukocyte counts .....	17
Urinalyses .....	136
Wassermann tests .....	73
Widal tests .....	7

On March 13, 1916, I made an examination of the three meals served in the main dining room and Table Number Six gives the menu and the grams of protein, fat and carbohydrate the meals contained, also the caloric value of the same. I also examined the milk served the men, at intervals, and found it to contain the required percentage of butter fat. A sample of the water used is sent once each week to the State Water and Sewage Laboratory at Lawrence for examination for typhoid and colon bacilli, turbidity and alkalinity. The laboratory is in charge of Prisoner No. 5357, who has given me a wonderful lot of assistance and who is most thorough and capable.

Table No. 6.

Dish.	Grams			Calories
	Protein	Fat	Carbohy- drates	
Hot cakes .....	31	11.75	157	888
Butter .....	0	9	0	80
Coffee with milk and sugar .....	5	5	24.5	125
Sausage .....	20	.5	0	108.5
Total .....	51.5	26.25	181.5	1201.5

DINNER.				
Boiled beef .....	60	15	0	375
Hominy .....	4	2.75	24	142
Macaroni .....	4	2.75	20	127
Bread .....	6	1	30	160
Syrup .....	0	0	12.61	50.44
Total .....	74	21.5	86.61	854.44
SUPPER.				
Baked potatoes .....	6	0	50	270
Gravy .....	3.33	18.84	14.84	263.66
Stewed prunes .....	0	0	57	228
Bread .....	6	1	30	160
Butter .....	0	9	0	80
Syrup .....	0	0	12.61	50.44
Tea with sugar .....	0	0	6	25
Total .....	15.33	28.84	180.45	1077.10
Grand total for three meals .....	140.83	76.59	488.56	3133.04

## OPTICAL DEPARTMENT.

Thanks to the kindness of Dr. Fryer and Dr. Haas, I was enabled to have men with bad errors of refraction examined and suitable glasses prescribed. While it is possible for the average physician to prescribe glasses for simple visual disorders, nevertheless, he is not trained, and is not capable of handling difficult cases. I therefore recommend that an ophthalmologist, one versed in optometry, be appointed to look after these cases. I would suggest that a salary of \$40 per month be paid him. This specialist to visit the institution once or twice each week. From November 16, 1915, to June 30, 1916, eighty-three men have had their eyes examined and have been fitted with glasses.

## SICK CALL.

The sick call is held every morning in the north cell wing. Men who have minor complaints and require medical or surgical attention come to this sick call and are given suitable medication or treatment. The average daily attendance has been thirty-seven. In the afternoon at 4:30 o'clock there is a special sick call line in the east wing for the miners. It is here they have minor cuts and bruises treated. The sick call is in charge of the prison physician, the hospital steward, and Prisoners No. 2841, 5120, and 5357.

## MORTALITY.

In the biennium 1914-1916 we have had seven deaths. This is lower than the average mortality rate. The number of the prisoner, the age and the cause of death is

given in Table Number Seven.

*Table No. 7.*

Register No.	Age.	Cause of Death
4842	40	Bright's disease
1328	33	Cerebral hemorrhage
4941	37	Homicide
4776	61	Suicide
5516	24	Ulcerative endocarditis
5512	62	Acute parenchymatous nephritis
5420	30	Broncho-pneumonia complicating typhoid

#### HOSPITAL KITCHEN.

I am very glad to say that this department of the hospital is a success in every respect, thanks to the careful and painstaking supervision of Prisoner No. 5012. The hospital kitchen has been under the direction of the steward and at my suggestion you had me assume charge in January of this year. The cost of the meals has averaged seven and one-half cents, the cheapest they have ever been. An analysis of the meals served in the hospital kitchen showed them to contain a sufficient amount of protein, fat and carbohydrate, also the normal amount of calories. Bed patients and post-operative cases are given liquid and light diets, vegetables and fruits are served every day and the men enjoy the meals immensely.

#### HOSPITAL STEWARD.

At the present time Mr. O. M. Spencer, one of the officers of the prison, is acting in the capacity of hospital steward. Mr. Spencer is a most capable and efficient officer and I respectfully recommend that the position of hospital steward be created and that Mr. Spencer receive that appointment at a minimum salary of \$75 per month.

#### NURSE FOR FEMALE DEPARTMENT AND

#### OPERATING ROOM.

The female quarters being rather far from the hospital department and there being no one there to look after the women who are sick and require medical and surgical attention, I most earnestly recommend that a trained nurse be appointed for that purpose. Her duties will be to look after the sick women and superintend the surgical cases and look after the operating room. The medical department is badly in need of a graduate female nurse.

#### GENERAL SANITATION AND HYGIENE OF PRISON.

The general sanitary condition of the prison is good, excepting the condition of the cells, which should be very much larger and should have better ventilating facilities. The cell houses should be remodeled at once, and each cell should have running water in it. I respectfully recommend that shower baths be installed in the cap-house so as to enable the miners to take a bath each day. I also recommend that sanitary drinking fountains be installed in the yard.

#### RESUME OF RECOMMENDATIONS AND SUGGESTIONS.

Tuberculosis cottage for the treatment of tuberculars.

Removal of surgical ward to present location of medical ward.

Installing and fitting another operating room.

Furnishing tooth powder and a tooth brush to each prisoner upon admission.

Appointing ophthalmologist to look after eye cases.

Creating the position of hospital steward.

Appointing a graduate female nurse to take care of sick female prisoners and look after operating room.

Remodeling cell buildings.

Installing shower baths in cap-house for miners.

Installing sanitary drinking fountains in the yard.

Very respectfully,

PHILIP B. MATZ,

Prison Physician.

J. K. Coddington, Warden, Kansas State Penitentiary.

Sir.—I have the honor to submit the biennial report of the State Asylum for the Dangerous Insane.

This institution was created by an act of the legislature of 1911, which authorized the Board of Directors of the State Penitentiary to erect, equip and maintain suitable buildings to be known as the State Asylum for the Dangerous Insane. Unfor-



tunately, no appropriation went with this act. The old psychopathic building which was first used for the insane was much too small, necessitating their removal to the women's old quarters. Even now we are cramped for room and it is impossible for me to work and get good results without having a suitable building and sufficient help. As a result of a lack of funds, at the present time, we are forced to use prisoners who have never had any training, to act as nurses. This is most deplorable and should be remedied at once.

The question of what can be done with the insane so as to keep their minds occupied is a most important one. Your plan of having them do the washing and ironing is practical and is certainly ideal work for them. There are a number of men who are carpenters and others who are tinsmiths by trade; I respectfully recommend that tools and material be furnished them so that they may be kept busy and their minds diverted from their conditions. The table below is a list of the mental diseases treated in the psychopathic ward.

Diseases*	Number
Dementia Praecox .....	8
Delusional insanity .....	3
Epilepsy. ....	5
Feeble-mindedness. ....	2
Imbecility. ....	4
Mania. ....	2
Manic depressive insanity .....	2
Melancholia. ....	2
Morphinism. ....	1
Senile dementia .....	1
Paranoia. ....	12
Total number of insane .....	42

In addition, there are a number of men in this ward classified as insane criminals; these have not as yet been adjudged in a probate court and I respectfully recommend that they be tried before a probate judge in conformity with the law.

There are some phases of the commitment laws which I think need revising. At the present time, a person who commits a crime and who is mentally deranged at the time, may be adjudged insane by a lay jury. I hold that the judge should appoint a board of two physicians, and that one of the examiners should be an expert alienist, preferably one of the super-

intendents of the state insane institutions. These are to pass upon the man's sanity. This is a most important point, as we have had men committed here who, in my estimation, should have been sent to prison, as they have not shown any signs of insanity.

The question of discharging men who have been confined here and who have apparently recovered should be looked into. At the present time there is no legal procedure regarding same. All that is necessary is a certificate from the prison physician stating that the man has recovered and he may be released. My plan is for every man who requests his release from this institution, to be examined by a board consisting of an insanity expert appointed by the judge who sentenced or committed the man, the prison physician, and an insanity expert appointed by the state to look after the interests of the prisoner, the prison physician acting as chairman. In this way both state and prisoner are represented, and the man is given fair examination and hearing.

Another suggestion that I have is when a man is discharged from this institution as cured, that he be required to keep in touch with the superintendent for at least a year, and keep us informed of his health. Very often insane individuals may be discharged during a period of mental normality.

The hospital accommodation at the present time is inadequate; men are still kept in the prison cells who should be treated in the hospital for the insane. It will be necessary for us to build an addition, and I have asked for an appropriation of five thousand dollars for that purpose.

It is said that 25 per cent of those who are committed to hospitals for the insane recover their previous health and their capacity for self-support, and that as many more are discharged as improved. We should therefore be doing all in our power to treat the insane scientifically and appropriately, and we haven't sufficient help and appliances with which to do that. I have accordingly asked for more help so

that I will be enabled to give the men better care, and have asked for an appropriation with which to purchase the necessary equipment.

After July 1, I shall endeavor to make a careful examination of the spinal fluid of each case confined at the hospital to ascertain the nature of the condition present.

Most cases of dementia praecox, tabes and paresis are of luetic origin, and under proper treatment, improvement and sometimes recovery is possible.

The following table shows what is absolutely required for the fiscal year 1916-1917:

Commissary. . . . .	\$ 6,588.00
Salary for three officers . . . . .	2,400.00
One neurological interne . . . . .	800.00
Clothing. . . . .	700.00
Drugs and surgical supplies . . . . .	500.00
Building addition . . . . .	5,000.00
Total. . . . .	\$15,988.00

Very respectfully,

PHILIP B. MATZ,  
Prison Physician.

—R—

### **The Most Valuable Treatment for Glaucoma.**

H. C. MARKHAM, A.B., M.D., Parsons, Kan.

The corneal trephine for the relief of glaucoma has been very widely discussed for a period of over three years until the real value of the operation has been fully determined. However, among many oculists there is quite an element of doubt as to its real and permanent value, due no doubt to early failures in which a faulty technic was employed. Many operators are afraid to attempt it, fearing bad results during operation, or failure to relieve the patient. Others have had unsatisfactory results and their experience acts as a very deterrent factor. In the limited number of cases the writer has operated he has had very satisfactory results, the vision gradually improving, the field of vision enlarging and tension permanently relieved with no secondary infections as yet; it being about twenty-two months since the first case was operated. One of these cases was reported to the

Kansas Medical Society last year because of the result obtained in an apparently hopeless case, as far as vision was concerned. The patient totally blind for a period of twelve days with a +3 tension, obtained complete reduction of tension with sufficient vision to recognize friends and make his way about the streets within one month after operation.

In the discussion of this case only one oculist plead guilty to having done a trephine, and he confessed that it was done upon an eye that was hopeless and was attempted to determine how well he could perform the operation. The technic is very important and must be closely observed or failure will crown one's efforts. The incision and area of dissection and iridectomy are the factors that contribute to more failures than all the other steps in the operation. Too much emphasis cannot be laid upon doing each step correctly. The list of failures and their nature are familiar to all, also the great stress upon secondary infection, which is principally a late manifestation of faulty operative procedure. From the amount of criticism offered one would be inclined to believe that all other surgical procedures were free from failure, or untoward results.

It has been the writer's privilege to have observed the work and results of the best men in the world and every one states that the Elliott is without a doubt the best operative procedure offered to the world.

Dr. Morax of Paris performs the trephine and the Van Lint in his clinic, but prefers the trephine. Dr. Secríst of Berne and Dr. Haab of Zurich are in favor of the trephine. Dr. Hess of Munich stated that his experience has been very satisfactory. Fuch and Meller of Vienna favor the trephine. Dr. Meller issued a statement a few months ago giving the comparative value of the La Grange and Elliott, in which a large number of cases were cited. His figures show in favor of the Elliott. These were cases in the Vienna clinic over which they had complete observation during operation and afterwards. Prof. Fuchs, as well as Prof. Meller, when



asked their opinion as to the value of the corneal trephine, answered very promptly and without reserve that it was the best yet offered. The secondary infection coming under their observation in many cases might be charged to the class of patients operated. The patients are the poorest of the poor and live in unsanitary surroundings with hardly sufficient food to keep body and soul together. Dr. Selix of Berlin stated that it was the most satisfactory operation yet devised. Dr. Selix's clinic is one of the largest in Europe and his opinion is one of the greatest value. Dr. Sattler of Leipsic stated that he had performed over 200 trephines without any failures and has never seen a secondary infection. This clinic is filled with a good thrifty type of German people which is a great factor in the absence of infections.

At the Royal Ophthalmic in London, my attention was called to their experience with cases dating back a couple of years. These cases had been observed at regular intervals and all had shown some improvement; central vision had increased remarkably in some with gradual enlargement of the field, and tension remaining within normal bounds in all cases. This favor was obtained through the courtesy of Mr. Hudson, he having taken a decided interest in these cases and followed them very closely in detail. Mr. Hudson stated that frequently there was a detachment of the choroid during operation, but as yet no untoward results were observed, as re-attachment had always taken place promptly. Secondary infections were very rare in their experience. A large number of secondary infections have been reported in this country. However, when many of these cases are analyzed the reason becomes apparent in many instances. Fox of Philadelphia claims to have had brilliant results with the operation. The value of the trephine, as heretofore stated, depends almost entirely upon technic. Faulty technic becomes apparent in a few days or a few months. Stock of Jena states that the Elliott is the most commendable operation in every case. It may

supplant iridectomy in every case. It is *TWELVE—Medical Journal* *Rich* easier, less dangerous than all other glaucoma operations. The earlier the operation is performed the greater are the chances of cure. It being the least dangerous, the operation should be proposed early.

The advantages are many, namely, easy to perform and complications rarely follow; little danger from infection; in the majority of cases a round pupil remains; depth of anterior chamber has little or no influence and post operative hemorrhage need not be feared. No astigmatism results and the consensus of opinion is that its results are superior to any one single method. The operation has the salient parts of superiority. First, simplicity of technic; second, absence of trauma to any of the vital parts of the eye; third, permanence of drainage established; fourth, its applicability to every case, regardless of the character or stage of glaucoma.

—R—

The China Medical Board of the Rockefeller Foundation announces that the trustees of Union Medical College in Peking have appointed Dr. Franklin Chambers McLean Professor of Internal Medicine, a position which carries with it the headship of the college. Union Medical College is one of the principal institutions through which the Board is working to improve medical and hospital conditions in China. The China Medical Board has also retained as consulting architect, Charles A. Coolidge of Boston, who designed the buildings occupied by the Rockefeller Institute in New York and the Harvard Medical School group in Boston. He is to study local building conditions in Peking and Shanghai and recommend to the Board a plan for adding to the equipment of Union Medical College a hospital with 200 beds and a new medical school embodying the latest developments in the art of laboratory and dormitory construction. He will also advise the Board as to other building plans.

# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - Editor

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### Just Business.

Last year the Journal made a little profit over and above all expenses of publication. The cost of publication has increased considerably, but we hope to make a little profit this year. We are sure we will if you will help—and you can help if you will, and you should help when you can, because every dollar the Journal earns will go back into it to make it larger and better and more useful to you.

The advertising pages are the principal sources of income for the Journal. The amount of this income depends upon the value of the space to the advertiser. The value of the space depends upon the returns received. The returns received depend upon you.

Every time you send an inquiry to one of the advertisers in the Journal you help some. When you are in need of drugs or instruments or supplies of any kind, and you give preference to products advertised in the Journal, you help a good deal.

When a traveling salesman comes to see you, look over the Journal and see if his firm is advertised in its pages. If it is, you can be sure he is all right. If his goods are advertised in the Journal, they are all right. If his firm uses no space in the Journal, tell him about it. Possibly he does not know you have a Journal.

Possibly he thinks you do not care anything about it. Tell him he can send you and thirteen hundred and thirty-five other men a full page letter, in your Journal, every month, and they will cost him less than one cent each. Now, if he knows that you and the thirteen hundred and thirty-five other members will read those letters every month, he will be willing to pay twice that amount or more. Why not read them?

If you will read the advertisements you will find them instructive, you will acquire some useful information, and you will know where to find what you want. If you want something that is not advertised in the Journal, write to the editor about it. He will do his best to furnish you all the information desired.

If you and the thirteen hundred and thirty-five other members of the Society will read the advertisements every month and will give preference in your purchases to those who use our space, we will guarantee to give you a much larger and a much better Journal next year.

—R—

### Our Membership.

In collecting and arranging the following data we have used the latest directory published by the American Medical Association for determining the number of registered physicians in each county, and a revised list of members in good standing, furnished by the secretary of the Kansas Medical Society, for determining the membership in each county.

There are 2,683 registered physicians in the state, and at this date there are 1,336 members in good standing, or a little less than fifty per cent. This compares very well with other states.

There are twenty-nine counties in the state having less than ten registered physicians each. There are only three counties in the state having more than one hundred registered physicians. There are twelve counties in the state, having together eighty-seven registered physicians, in which there is no member of the Society. There are three counties in the state



which show a membership of one hundred per cent. Of the three counties having more than one hundred registered physicians Wyandotte has 197 with 49.75 per cent members, Shawnee has 166 with 47.59 per cent members, and Sedgwick has 146 with 39 per cent members.

Our comparative table has been arranged by councillor districts, but the per cent of membership in these districts must not be taken too literally as an indication of the efficiency or the extent of work of the councillors or county secretaries. For instance, in Meade County there are five registered physicians and five members of the Society—therefore every physician in Meade County is eligible—while in Shawnee County there are one hundred and sixty-six registered physicians and seventy-nine members. But of the one hundred and sixty-six registered physicians in Shawnee County at least thirty-eight are ineligible, thirteen are not in practice, and three have moved away. A similar proportion of ineligibles will no doubt be found in all of the larger counties so that the percentage of membership must be considered in connection with the conditions existing in each county.

An analysis of the membership in each district may suggest the direction in which the efforts of the councillor may be most profitably expended.

The eight counties comprising the First District have 247 registered physicians, and of these 40 per cent are members. There are four counties with a membership of over 50 per cent, and one county with a membership of less than 25 per cent.

In the ten counties comprising the Second District, there are 502 registered physicians and of these 50.08 per cent are members. There are five counties in this district with a membership of 50 per cent and over, and no county with less than 33½ per cent.

In the nine counties comprising the Third District, there are 408 registered physicians and of these 53.9 per cent are members. There are six counties with a membership of over 50 per cent and but

one county with less than 33½ per cent.

In the nine counties comprising the Fourth District, there are 379 registered physicians and of these 44.85 per cent are members. There are four counties with a membership of over 50 per cent and there are two counties with a membership of less than 20 per cent.

The Fifth District is near to the highest in membership percentage. In the ten counties comprising this district, there are 313 registered physicians and of these, 54.63 per cent are members. Six of these counties have more than a 50 per cent membership. Four counties have more than 75 per cent membership, but there is one county in which there are thirty-four registered physicians with no members of the Society.

There are 360 registered physicians in the nine counties comprising the Sixth District and of these, 46.39 per cent are members of the Society. There are six counties which have a membership of 50 per cent or over, but there are two counties, one with sixteen and one with thirteen registered physicians, which have but one member each.

There are but six counties in the Seventh District and there are 134 registered physicians in these six counties. Fifty-six per cent of these are members of the Society. This is next to the highest in membership percentage. Four counties have more than 50 per cent of membership. One county with fourteen registered physicians has no member of the Society.

The Eighth District also has but six counties, with 111 registered physicians, and of these 41.44 per cent are members of the Society. Three counties have more than 50 per cent membership. One county with sixteen registered physicians has no member and one county with twelve registered physicians has but two members.

In the six counties comprising the Ninth District, there are seventy-one registered physicians and of these, 45.07 per cent are members. Three counties have a membership of 50 per cent or more. Three counties in the district have less than ten reg-

istered physicians in each, while the largest number in any county in the district is twenty.

The Tenth District makes the best showing in membership percentage. In the eight counties comprising this district, there are but thirty-seven registered physicians and 67.56 per cent of these are members. Two counties have 100 per cent membership. Seven of the eight counties have 50 per cent or more. One county has 40 per cent. The largest number of registered physicians in any county in the district is eight.

There are fourteen counties in the Eleventh District with a total of ninety-three registered physicians and of this number, 39.78 per cent are members of the Society. Five counties have a membership of 50 per cent or more, five counties have 20 per cent or less, and two counties have no member of the Society. Nine of the fourteen counties have less than ten registered physicians each, while the largest number in any county is seventeen.

The Twelfth District makes the poorest showing in membership percentage. The ten counties comprising this district have thirty-seven registered physicians and of these, 35.13 per cent are members. In six counties there is no member of the Society. In one county there is a membership of 100 per cent, in one county 75 per cent, in one county 57 per cent, and in one county 25 per cent. Seven counties have less than five registered physicians each, and the largest number in any county in this district is nine.

#### COMPARATIVE TABLE OF REGISTERED PHYSICIANS AND SOCIETY MEMBERS IN EACH COUNTY, BY DISTRICTS.

##### *First District.*

Counties.	Physicians.	Members.
Nemaha . . . . .	30	20
Brown . . . . .	31	16
Doniphan . . . . .	20	6
Jackson . . . . .	28	18
Atchison . . . . .	39	17
Jefferson . . . . .	26	16
Marshall . . . . .	42	10
Washington . . . . .	31	15
Total . . . . .	247	118

##### *Second District.*

Counties.	Physicians.	Members.
Leavenworth . . . . .	55	38
Wyandotte . . . . .	197	98
Johnson . . . . .	33	10
Douglass . . . . .	51	27
Osage . . . . .	26	9
Franklin . . . . .	42	30
Miami . . . . .	29	10
Coffey . . . . .	22	11
Anderson . . . . .	24	10
Linn . . . . .	23	12
Total . . . . .	502	255

##### *Third District.*

Woodson . . . . .	14	6
Allen . . . . .	36	23
Bourbon . . . . .	37	14
Wilson . . . . .	28	20
Neosho . . . . .	39	20
Crawford . . . . .	83	47
Montgomery . . . . .	77	45
Labette . . . . .	60	34
Cherokee . . . . .	34	11
Total . . . . .	408	220

##### *Fourth District.*

Clay . . . . .	22	12
Riley . . . . .	29	14
Pottawatomie . . . . .	26	8
Wabaunsee . . . . .	21	4
Geary . . . . .	15	8
Dickinson . . . . .	42	8
Morris . . . . .	19	13
Lyon . . . . .	39	24
Shawnee . . . . .	166	79
Total . . . . .	379	170

##### *Fifth District.*

Barton . . . . .	28	21
Rice . . . . .	26	22
McPherson . . . . .	28	20
Marion . . . . .	29	23
Chase . . . . .	15	7
Greenwood . . . . .	19	8
Bartler . . . . .	34	0
Harvey . . . . .	37	21
Reno . . . . .	78	34
Stafford . . . . .	19	15
Total . . . . .	313	171

##### *Sixth District.*

Pratt . . . . .	18	9
Kingman . . . . .	17	10
Elk . . . . .	13	8
Chautauqua . . . . .	16	1
Cowley . . . . .	58	34
Sumner . . . . .	54	32
Harper . . . . .	25	15
Barber . . . . .	13	1
Sedgwick . . . . .	146	57
Total . . . . .	360	167

##### *Seventh District.*

Rooks . . . . .	14	0
Osborne . . . . .	20	13
Jewell . . . . .	24	15
Mitchell . . . . .	17	13
Republie . . . . .	21	17
Cloud . . . . .	38	17
Total . . . . .	134	75



*Eighth District.*

Counties.	Physicians.	Members.
Russell. . . . .	15	6
Lincoln. . . . .	14	8
Ellsworth. . . . .	13	8
Ottawa. . . . .	16	0
Saline. . . . .	41	22
Ellis. . . . .	12	2
Total. . . . .	111	46

*Ninth District.*

Cheyenne. . . . .	4	1
Rawlins. . . . .	6	1
Decatur. . . . .	7	4
Norton. . . . .	16	8
Phillips. . . . .	18	3
Smith. . . . .	20	15
Total. . . . .	71	32

*Tenth District.*

Sherman. . . . .	5	2
Thomas. . . . .	5	3
Sheridan. . . . .	4	2
Graham. . . . .	8	5
Trego. . . . .	3	3
Gove. . . . .	6	6
Logan. . . . .	3	2
Wallace. . . . .	3	2
Total. . . . .	37	25

*Eleventh District.*

Rush. . . . .	11	2
Pawnee. . . . .	12	8
Edwards. . . . .	12	6
Ford. . . . .	17	8
Hodgeman. . . . .	4	0
Ness. . . . .	7	5
Lane. . . . .	2	1
Gray. . . . .	5	1
Finney. . . . .	12	2
Scott. . . . .	3	2
Wichita. . . . .	3	1
Kearney. . . . .	3	1
Hamilton. . . . .	2	0
Greeley. . . . .	0	0
Total. . . . .	93	37

*Twelfth District.*

Kiowa. . . . .	7	4
Commanche. . . . .	9	0
Clark. . . . .	4	1
Meade. . . . .	5	5
Seward. . . . .	4	3
Haskell. . . . .	2	0
Stevens. . . . .	1	0
Grant. . . . .	1	0
Stanton. . . . .	1	0
Morton. . . . .	3	0
Total. . . . .	37	13

R

**Anterior Poliomyelitis.**

The epidemic of poliomyelitis which appeared in Brooklyn about the first of June was the cause of considerable alarm in other parts of the country, but fortunately it seems to have spread but little from the site of its first appearance. A

few scattered cases, some of questionable diagnosis, have been reported in other places.

At this date less than three thousand cases have been reported, but the mortality rate has been high—something like 20 per cent. Dr. Archibald Church, in his recent book, says: "So far as life is concerned, this disease terminates fatally only exceptionally, and if the patient survives the onset of the paralysis but a short time, life may be considered out of danger." Those who have watched the disease most closely find that it does not correspond to the classical descriptions and that it has widely varied manifestations. Some observers have made as many as eight classes, but (Bul. Dept. Health, N. Y., July 8):

"Peabody, Draper and Dochez of the Rockefeller Institute make a somewhat simpler classification.

1. The abortive cases which never become paralyzed.

2. The cerebral group with spastic paralysis.

3. The bulbo-spinal group.

It was found by Wickman that 25 to 56 per cent of the cases diagnosed were abortive, and he considers these figures as probably too low.

Cases under Class 1, being most likely to escape recognition, are therefore the most important in their relation to public health because of their disease-spreading potentiality. Therefore, a discussion of the symptomatology of this group is timely.

The initial symptoms are very like those of the paralytic cases: Fever, hyperaesthesia, drowsiness, headache, vomiting, varying degrees of stiffness of the neck, Kernig, positive Macewen. Seen during the first twenty-four or thirty-six hours, the diagnosis of epidemic meningitis can be made in no way except lumbar puncture, and even this is sometimes confusing by the microscopic examination as the fluid at this stage may be slightly turbid. The diagnosis from other acute infections of childhood depends to some extent on

the greater degree of hyperaesthesia and also on the examination of the spinal fluid, which in meningism, with other diseases, is normal. Recovery may take place in a few days. No diagnosis may be made unless expert consultation is obtained early. On the other hand, the symptoms may run on for two or three weeks. There often develops loss, diminution or inequality of the knee jerks and loss of the pupillary reflexes. At this stage the differential diagnosis from tuberculous meningitis is very difficult and lumbar puncture, while helpful, is by no means positive, the fluids in the two conditions being often very similar. In many cases there is a varying degree of weakness, often transient, and slight facial palsies are frequent. These abortive cases very evidently constitute the most dangerous foci for the dissemination of the disease.

A very unusual manifestation of poliomyelitis is blindness. The Meningitis Division of the Department of Health has seen two such cases, one being in the present epidemic. In the first case, the vision was restored at the end of about three months. The second was a quite recent case and the blindness still persists.

Cases with the bulbar type of paralysis, with difficulty in speaking and swallowing, are not uncommon in this epidemic and have in some instances been diagnosed as croup.

In a fairly large number of cases, a rapidly ascending type of paralysis has been present, involving the muscles of respiration and ending with death. Some of these, when seen late, after pulmonary oedema has developed, have been diagnosed as broncho pneumonia.

The fatalities of the present epidemic have been largely due to these two types of the disease.

The spinal fluid in poliomyelitis is usually clear and increased in amount. The albumen and globulin are increased in varying degrees and there is usually a good reduction of Fehling's. The cellular increase ranges from slightly above normal to over 900 cells per cubic centimeter.

Early in the disease the cells may be 50 per cent or more polymorphonuclears. Later there are usually 90 per cent or more mononuclears. There are frequently large mononuclear cells that seem somewhat characteristic of these fluids."

Since the epidemic which occurred some years ago at least something has been learned about the spread of the disease. It has been pretty well established that the germ is present in discharges from the nose, throat and bowels of those ill with the disease. This is true even in those cases that do not go on to paralysis. Although it sometimes happens that the disease is transmitted from a patient to other members of the same family, such occurrences are rare, but the transmission of the virus from a patient to other members of the same family is common. So that immune carriers are responsible for the greatest spread of the disease. The infective material is harbored in the nasal or mouth secretions of the carrier.

—————R—————

### Cremation.

Possibly it does not appeal to your sense of propriety, or possibly you have some sentiment opposed to this method of disposing of the dead. Your better judgment, however, must suggest the wisdom of a general adoption of cremation. It is a proposition which every physician should advocate. Cremation is growing in popularity, but not so rapidly or so generally as its commendable features justify. There are fifty-three crematories in this country and up to the end of 1913 there had been 86,006 incinerations. The first crematorium in this country was built by Dr. Francis Julius Le Moyne at his own expense.

The fourth annual convention of the Cremation Association of America will be held in the auditorium of the Hotel Gibson, Cincinnati, Thursday and Friday, August 24 and 25. All of our readers who believe in or are interested in cremation are cordially invited to attend. They are also eligible to associate membership upon payment of one dollar to the treasurer,



Mr. E. P. Samson, 433 Sixth Avenue, Pittsburg, Pa., a formal application not being required. Money thus obtained is used for purposes of propaganda.

—R—

### The Chemotherapy of Tuberculosis.

Studies in the chemotherapy of tuberculosis have not yielded the positive results hoped for by the optimistic practitioner, but they have approached more closely to a solution of the problem of cure in this condition than have the researches in bacteriology alone.

Koch reported, in 1890, the effects which various chemicals had upon the growth of tubercle bacilli. One of the striking phenomena was the effect of potassium auricyanide, which in solution of 1:2,000,000 kills the tubercle bacilli *in vitro*, but not *in vivo*. The trouble seemed to be that potassium auricyanide is changed into an inert substance by the action of the organic cells before it reaches the tubercular lesion or the bacilli. Fischer discovered "that the excretions of the epidermis of a tuberculous patient, as well as tuberculin, may prevent 0.5 per cent solution of potassium ferrocyanide and 1 per cent solution of ferric chloride from combining to form Berlin blue. This shows that the excretions may combine with one of the two chemical substances before they combine with each other."

Other investigators also found that copper affected the tubercle bacilli. Dr. Gen-saburo Koga, who had been experimenting upon the effects of potassium auricyanide, began a series of experiments upon animals to determine the effects of various chemicals upon tubercular lesions and tubercle bacilli. The results of these experiments show that a solution of potassium cyanide and copper, later described as cyanocuprol, had the most constant and definite effects. After repeated injections of this solution "the congestion and leukocytic infiltration about the lesions are markedly decreased, the cheesy material resulting from degeneration of the lesions and other degenerative products are in process of absorption, and young connec-

tive tissue is being actively produced in the periphery. While these changes are taking place the number of bacilli is also being reduced until finally they can no longer be detected on microscopic examination."

Later Koga began the use of this solution in the treatment of human subjects. The treatment was begun at the Imperial Institute for the Study of Infectious Diseases and was continued at the Kitasato Institute for Infectious Diseases. A complete and detailed report of his experiments upon animals and also the results of the use of the potassium cyanide and copper solution in the treatment of sixty-three cases of tuberculosis was read before the Alumni Meeting of the Kitasato Institute for Infectious Diseases, Tokio, April 4, 1915, and has just been published in the August number of the Journal of Experimental Medicine. Of the sixty-three cases treated twenty-five were cured, that is they had gained in weight, temperatures were normal, there were no physical signs, and the sputum was free from bacilli. Twenty-two cases were improved, that is they had gained in weight, temperatures were normal, but bacilli were occasionally found in the sputum, and other symptoms were still present—some of them were still under treatment. Four cases died. Twenty-nine of the sixty-three cases were non-active tuberculosis; nineteen in the first stage, of which thirteen were cured, two improved, one suspended treatment, and three were still under treatment; six were in the second stage, of which three were cured and three improved; four cases were in the third stage and one of these was cured and three improved. Twenty-six of the sixty-three cases were cases of active tuberculosis. Of these seven were in the first stage, of which four were cured, two improved and one was still under treatment; eleven were in the second stage, of which three were cured, five improved, one suspended treatment, and one was still under treatment; eight were in the third stage, of which three were improved, three died, two were still under

treatment. Eight of the sixty-three were cases of surgical tuberculosis and one of them was cured, four were improved, two suspended treatment, and one was still under treatment.

In the summary of his report Dr. Koga says: "A general review of the cases will, I think, indicate that the preparation greatly improves or apparently cures pulmonary and surgical tuberculosis in the first and second stages, and that it seems also to produce beneficial effects upon the disease in the third stage."

Dr. Morisuke Otani, also of the Kitasato Institute, presents a paper in the same number of the Journal of Experimental Medicine, in which he gives his experience in the clinical treatment of tuberculosis with cyanocuprol. In all about one hundred cases were treated. He concludes that cyanocuprol is markedly effective in tuberculosis and that it is more generally applicable than tuberculin. The dose should be determined for each case but should never exceed the maximum of 8.5 cc. The intervals between injections should never be less than two weeks and it should always be given intravenously.

—R—

## SOCIETY NOTES.

### Harvey County Society.

The following program has been prepared for the August meeting of the Harvey County Medical Society:

"Neoplasms of the Bladder," Dr. A. H. Nossman.

"Kidney Functioning," Dr. R. C. Hartman.

"Gleanings from the Journals," Drs. Smolt, Miller and Howard.

### Lyon and Morris County.

The Lyon County and Morris County Medical Societies, their wives, children and sweethearts are to have a picnic at Americus on August 1. It is planned to arrive about 1:30 p. m.

2:00 p. m. Speeches.

Address of Welcome—J. B. Brickell.

In behalf of Lyon County Medical Society—J. M. Perington.

In behalf of Morris County Medical Society—W. H. H. Smith.

In behalf of Num.—Mrs. C. F. Hoover.

Others will be called extemporaneously.

2:00 p. m. Athletic contests. 1. Fat man's race. 2. Egg race. 3. Potato race. 4. Pillow fight. 5. Pitching horseshoes. 6. Nail driving. 7. Ball throwing.

4:30 p. m. Base ball, Lyon County Medical Society vs. Morris County Medical Society. Game 2-7 innings.

6:00 p. m. Water sports. Bring bathing suits or suitable clothing.

6:30 p. m. Picnic dinner.

8:00 p. m. Address, Dr. Arthur E. Hertzler, Kansas City, Mo.

Yours for a good time,

ALBERT BEAM, Secretary.

### Dr. W. F. Fairbanks.

Dr. William F. Fairbanks was born in Mantua, Cuyahoga County, Ohio, October 18, 1860. Died at his home in Kansas City, Kansas, July 22, 1916. He is survived by his wife, Mrs. Jennie Fairbanks, one brother, Ernest E. Fairbanks of Kissimmee, Fla., and his aged father, Rev. G. H. Fairbanks of Cleveland, Ohio. He graduated from Hiram College in 1881, being the youngest graduate then upon the alumnae roll. His diploma was signed by James A. Garfield. After teaching school in his native county for three years he entered upon the study of medicine and graduated from the Western Reserve University of Cleveland, Ohio, in 1886. After practicing for a few years in Ohio he came west and located in Kansas City, Mo., and in 1895 he moved to Kansas City, Kansas, which was his home until his death.

His health has been failing for the last four years but he did not finally relinquish his practice until about six months ago. Dr. Fairbanks has served as president of the Wyandotte County Medical Society of which he was an active member for many years and has represented his County Society in the State Association



for a number of years.

He was held in high esteem by all who knew him on account of his high professional ability, his genial disposition and his many activities for the betterment of the community where he lived.

After a short service at the home the body was taken to Cleveland, Ohio, for interment in Lakeview Cemetery.

The following resolutions were adopted at a called meeting of the Wyandotte County Medical Society July 22, 1916:

Whereas, By the death of William F. Fairbanks, M.D., which occurred on July 22, 1916, the medical profession of Kansas City, Kansas, and the State of Kansas, has lost a very valuable member, an upright physician, and an influential citizen; and

Whereas, To those who knew him best, the loss of his presence will be most keenly felt; the beneficial influence which he has left to his associates will, however, in a measure, compensate for his absence; and

Whereas, The power of his example, both in words and deeds, his genial manners, his kindly spirit, and potent actions, will forever have their bearing on the lives of his fellow practitioners, and all others of his associates;

Therefore, Be It Resolved, by the Wyandotte County Medical Society—

That it greatly deplores its loss on account of the death of Dr. William F. Fairbanks, and extends the sympathies of its members to the bereaved family;

That these resolutions be transcribed in the minutes of the Society, published in the State Medical Journal, and that a copy be forwarded to his sorrowing household.

## MISCELLANEOUS.

### Rural Health—America's First Duty.

Washington, D. C., July 14.—“The estimated economic loss which our nation suffers each year from typhoid fever and malaria alone aggregates \$928,234,880, leaving out of entire account the sorrow, the unhappiness, the misery, and the inefficiency which follow in their train.” Senator Joseph E. Ransdell of Louisiana

today addressed the Senate on the subject of “Rural Health—America's First Duty.” “The greatest asset which our country can have,” said Senator Ransdell, “is the healthy American citizen, and valuable as it may be to increase the health of livestock and vegetation, it is of far greater importance that we throw every possible safeguard about the health of the man who is responsible for that livestock and vegetation. Over 900 million dollars lost every year! A sum which is sufficient to put our country into a state of preparedness equal to that of any nation in the world, enough money to give us the largest navy afloat and the most efficient army which the world has ever seen, is annually offered up as a sacrifice to two diseases which are entirely preventable. Enough money to pay the annual expenses of every college student in the United States is absolutely thrown away every year.” Senator Ransdell estimates the grand total loss from typhoid fever at \$271,932,880 per annum, and the loss from malaria at \$694,904,750 per year; the total per capita loss from these two diseases being \$9.46. By comparative estimates it was shown that the United States Government appropriated \$5,016,175 for the investigation and prevention of the diseases of animal and plant life and only \$1,917,566 for the investigation and prevention of the diseases of man.

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### Scientific Researches Into the Causes of Alcoholism and Inebriety.

By T. D. CROTHERS, M.D., Hartford, Conn.

One great fact has been established by accurate laboratory and clinical research, viz., that the physiological action of alcohol on the cell and tissue is that of an anaesthetic and depressant, and not a tonic or stimulant. This has been accepted by the profession generally, and while it revolutionizes the previous theories, explains in some degree why alcohol is so fascinating.

Beyond this, there is a vast range of causes producing alcoholism and inebriety that are practically unknown. All reme-

dial and restorative efforts are based on the theory that alcohol is the special and particular cause of all the degenerations which follow from its use.

Careful studies of individual cases show this to be untrue; also that in many instances alcohol is only a symptom. It may be a complicating drug intensifying unknown conditions that were latent before. It may be a specific poison localizing in certain organs. It is also cumulative, and associated with the most complex neuroses.

The causes that impel man to drink have never been studied scientifically. The literature up to the present is a confusing mass of theories and opinions unverified.

In this unknown region there are innumerable questions like the following: Why are certain periods of life more favorable for the outbreak of the craze for alcohol than others? Why does the desire to drink break out suddenly in diverse conditions, and then subside from causes inadequate to explain the change? What is the explanation of the exact periodicity of these drink excesses that are as certain as the rise and fall of the tide? What are the causes in surroundings and conditions of living that provoke these paroxysms? Why do men drink after injuries, diseases, shocks, losses, disappointments, business reverses and great successes in life? What degenerations are transmitted from the parents to the children that create susceptibility or immunity to the effects of alcohol? Why are some persons able to drink in so-called moderation for years, and why do others quickly become diseased and die? Why do some men drink in early life, then abstain, and in middle or later life turn to alcohol again and drink until death? Why are some persons susceptible to the contagion of surroundings and companions, while others are immune? What physical and psychical causes produce the drink craze?

These are some of the unknown causes and conditions which have never been studied with scientific exactness. One of the most prominent and widely accepted explanations is the so-called moral cause.

Physical conditions are considered results and not causes.

A Research Foundation has recently been organized at Hartford, Conn., for the purpose of making an exact scientific study of these questions. It will be endowed and become a permanent work. Preliminary studies have already begun, and practicing physicians from all parts of the country are appealed to for the records and histories of cases which will be compiled and tabulated for the purpose of determining the laws which control and govern them.

This is the first scientific effort to take up the subjects of alcoholism and inebriety and determine the causes which produce them outside of alcohol. Science has shown that these conditions are governed by exact physical and psychical laws, which if known and understood would indicate the most practical means and measures of relief.

The Foundation will be practically a laboratory or clearing-house, where persons can come for examination, counsel and advice. To a large class of persons who want something more than pledges, appeals or sanatorium treatment, this will open a new field of means and measures for relief that will be most welcome.

Correspondence is earnestly solicited from the profession.

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### **Ragweed Hay Fever Vaccine Mulford.**

There are many hay fever sufferers who are sensitive to one particular pollen, and a vaccine prepared from that pollen is, of course, the best agent for affording them relief.

For this reason the H. K. Mulford Company of Philadelphia is furnishing, in addition to Hay Fever Vaccine Fall Mulford, a ragweed pollen extract, properly standardized and known as Hay Fever Vaccine Ragweed Mulford.

Hay Fever Vaccine Fall Mulford contains the protein extract from the pollens of ragweed, goldenrod and maize, dissolved in physiological saline solution, and accurately standardized.



Hay Fever Vaccine Ragweed Mulford contains the protein extract from the pollen of ragweed only, dissolved in physiological saline solution and accurately standardized.

The injections at first may be given at about five-day intervals, the intervals being shortened or lengthened, according to indications. Ophthalmic and skin tests are not considered necessary in the control of dosage. It is sufficient to start with a small dose and increase gradually until satisfactory results are obtained.

There are no contraindications to the therapeutic or prophylactic use of Hay Fever Vaccine Mulford so far as known. A small percentage of patients may be hypersensitive to the protein extracts, in which case the dose may be accordingly reduced.

A complete "working bulletin" on Hay Fever Vaccine has been issued by the H. K. Mulford Company of Philadelphia, and contains valuable information regarding the treatment of this troublesome malady. It can be obtained from the company on request.

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### **Industrial Welfare Number of "The Modern Hospital."**

The August number of "The Modern Hospital, St. Louis and Chicago, is devoted to a symposium on welfare work among the industrial corporations of the country. There are editorials by those competent to write on this important subject, a great number of papers written by welfare directors in some of the most important industrial corporations, and an immense amount of statistics and figures and facts showing the huge volume of work that the corporations are doing to protect their employees against sickness, accidents, and discontent. The journal contains many illustrations of first aid stations, emergency hospitals, and welfare departments of industrial plants, and many facts that should be of great help to those interested. Among the topics discussed are those of first aid, industrial nursing, lunches and diets for industrial employees,

safety devices in factories, and athletic and social clubs for employees. The editors frankly state that they have been unable to obtain figures as to cost of welfare work in the industries, but a number of writers attempt to make deductions and draw conclusions from their experiences of the past few years.

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### **New and Nonofficial Remedies.**

Standard Radium Solution for Drinking (1 microgram Ra).—Each bottle (60 Cc.) contains radium chloride equivalent to 1 microgram Ra. and 1.3 mg. of barium chloride. The solution contained in one bottle is taken after each meal. The Radium Chemical Co., Pittsburgh, Pa. (Jour. A.M.A., July 1, 1916, p. 35.)

Radium Bromide, Schlesinger Radium Co.—It complies with the standards of N. N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Carbonate, Schlesinger Radium Co.—It complies with the standards of N. N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Chloride, Schlesinger Radium Co.—It complies with the standard of N. N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo.

Radium Sulphate, Schlesinger Radium Co.—It complies with the standard of N. N.R. and is sold on the basis of its radium content. Schlesinger Radium Co., Denver, Colo. (Jour. A.M.A., July 8, 1916, p. 121.)

Vitalait Starter.—A culture in vials of the bacillus bulgaricus and the streptococcus acidi lactici in symbiosis. It is intended for the home preparation of fermented milk. Sufficient to prepare 1 to 3 quarts of fermented milk is sent on request of the physician to the patient twice a week. The Vitalait Laboratory, Inc., Newton Centre, Mass. (Jour. A.M.A., July 15, 1916, p. 203.)

### Propaganda for Reform.

**Aromatic Spirits of Ammonia.**—This is an old fashioned complex mixture. Its reputation has little scientific basis. Its effects probably are psychic, in the main. Such effects might be expected from the irritation of the nasal mucosa by the ammonia and to the flavor and odor of the lemon, lavender and nutmeg oils. The physical effect is probably due to the alcohol, though the ammonium carbonate and uncombined ammonia may have some restorative action by the irritation of the gastric mucosa or by their neutralization of nauseating acids in the stomach. When the effects of ammonium carbonate are desired, this is better given in aqueous solution. When the effects of alcohol are desired, whiskey is to be preferred. (Jour. A.M.A., July 1, 1916, p. 65.)

**The Pharmacopoeia Revision.**—As usual the Pharmacopoeia about to be issued will be antiquated when it comes out. Some of the drugs in it will have become more or less obsolete, while many new ones which have proven of value will not be there. Since all the publications of the A.M.A. are issued promptly and in excellent style, and are complete, correct and up to date, it is suggested that the U.S.P. should be taken over by the A.M.A., and be henceforth published by it. It may be extreme to say that the world would be almost as happy without a Pharmacopoeia, but at least we could get along very nicely with a Pharmacopoeia about one-half the size of the present one. A good deal of the matter it contains is quite superfluous and its deletion would prove distinctly advantageous to (1) the book, (2) to the medical profession, (3) to the pharmaceutical profession, and (4) last but not least, to the students of medicine and pharmacy. (Critic and Guide, July, 1916, p. 239.)

**Wine of Cardui Verdict.**—Anent the verdict in the recent "Wine of Cardui trial" awarding one cent damages to the Chattanooga Medicine Company, a medical journal offers condolences to the American Medical Association, declares

that the verdict is "a very decided victory for the 'patent medicine' association," and asks, "Is publicity the way to accomplish the true end?" The outcome of the case was a moral victory for the Association and publicity is the only rational means of attacking the nostrum evil, whether of the "patent medicine" or of the "ethical proprietary" variety. Until the public is given definite and specific facts no great strides will be made in preventing unscrupulous cupidity from preying on the sick and suffering. The faith of the public in patent medicines of all sorts continues because no small part of the medical profession is itself still under the blight of the "patent medicine" business—albeit the preparations in question are euphemistically spoken of as "ethical proprietaries." (Jour. A.M.A., July 15, 1916, p. 206.)

**Cocaine Substitutes.**—Treasury Decision 2194 places "alpha and beta eucaine or any of their salts or any synthetic substitute for them" under the provisions of the so-called Harrison Narcotic Law. To this ruling, the Farbwerke-Hoechst Company, the manufacturers of novocain, a synthetic substitute for cocain, took exception and, by agreement, a test case was argued before the United States District Court of New York. It is reported that the court took the case from the jury and ordered a verdict for the Farbwerke-Hoechst Company on technical grounds. (Jour. A.M.A., July 15, 1916, p. 208.)

**Aromatic Spirits of Ammonia in Shock.**—Horatio C. Wood, Jr., explains that any stimulating effect which may be observed after the oral administration of aromatic spirits of ammonia is due either to a psychic effect or to its local irritant action on the gastric mucosa, just as the irritation by ammonium carbonate, in the form of smelling salts, of the mucous membrane of the nose may reflexly excite the medulla. (Jour. A.M.A., July 15, 1916, p. 231.)

**Phenol Antidotes.**—Various substances, fixed oils, glycerin, diluted sulphuric acid, the soluble sulphates of the alkalies and alkali earths, have been recommended as



antidotes or prophylactics of phenol poisoning. M. I. Wilbert discusses the value, or lack of value, of the various reagents proposed as antidotes to phenol poisoning. He points out that glycerin will not prevent the production of gangrene or the absorption of phenol. Wilbert points out that the other substances mentioned have been found inefficient as detoxicants for phenol, and in many instances distinctly harmful. He further notes that, while the value of alcohol as an antidote for phenol poisoning has been scientifically disproved, yet even as late as 1915, the fallacy that ethyl alcohol is an antidote to phenol has been embodied in state laws designed to restrict the sale of phenol. Recent investigation, carried out in the Hygienic Laboratory, shows that in the presence of water neither alcohol nor glycerin has any detoxicating effect on phenol. (Jour. A.M.A., July 15, 1916, p. 233.)

**Poisoning from Lead Paints.**—The reports of the British departmental committee, appointed to investigate the dangers of the use of lead compounds in the painting of buildings, shows the principal source of poisoning to be dust, produced during the mixing of dry white lead with oil and in the dry rubbing down process. While the first danger is done away with by the use of ready mixed paints, the committee proposes drastic legislation to remedy the second evil. The committee recommends the enactment of a law prohibiting the importation, sale or use of any paint material containing more than 5 per cent of its drug weight of soluble lead compounds. (Jour. A.M.A., July 15, 1916, p. 234.)

**Poisonous Properties of the Garden Daffodil.**—The bulbs of the garden daffodil (known botanically as *narcissus pseudonarcissus*) contain an alkaloid (or alkaloids) whose physiologic action differs according to the stage of growth of the plant. The alkaloid extracted from the flowering bulb produces dryness of the mouth, checks cutaneous secretions, dilates the pupil, quickens the pulse, and slows and weakens the heart contractions. The

alkaloid extracted from the bulbs after flowering produces copious salivation, increases cutaneous secretion, contracts the pupil, and produces slight relaxation of the pulse, slight faintness and nausea. Such widely divergent physiologic effects indicate that there must be considerable differences in the nature of the alkaloids at the different times mentioned. Since the daffodil is so common in gardens it might be well to consider it in poisonings of mysterious origin. (Jour. A.M.A., July 22, 1916, p. 290.)

**Hexamethylenamin in Anterior Poliomyelitis.**—It has been shown that hexamethylenamin has no germicidal activities, except in an acid medium. Therefore, it is of special value only in infections of the pelvis of the kidney, ureters, bladder and uretra when the urine is acid. It cannot be expected to exert germicidal activity in the spinal fluid, which is alkaline and hence is of no value in the treatment of anterior poliomyelitis. (Jour. A.M.A., July 22, 1916, p. 309.)

**Quality of Sodium Sulphite.**—Investigation has shown that while the crystallized sodium sulphite is unreliable, the dried or desiccated form of sodium sulphite is generally of good quality and relatively permanent. A. H. Clark reports experiments showing that specimens of desiccated sodium sulphite keep for years with little deterioration. (Druggists' Circular, July, 1916, p. 396.)

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### **Hay Fever and Its Complexities.**

Because of the protean manifestations of hay fever and its irregular appearance, either as the early-summer variety or the so-called autumnal catarrh, it is evident that no single therapeutic agent can eliminate, or even modify, the symptoms in all cases. Each individual sufferer presents problems that pertain peculiarly to himself, and other than the vasomotor relaxation of the upper respiratory tract, which is common to all, there are no uniform underlying pathologic changes.

These cases may be divided into three classes: those in which the neurotic ele-

ment is the predominating feature; those wherein a general systemic condition, as lithemia, seems to stand out conspicuously; and—much the largest class—those in which the affection is intimately associated with the presence of pollen in the atmosphere.

Undoubtedly the suprarenal substance, in the form of its isolated active principle, Adrenalin, is one of the most reliable agents for the treatment of hay fever. Experienced physicians assert that it successfully controls the symptoms in a large majority of cases. Adrenalin Chloride Solution and Adrenalin Inhalant are the preparations most commonly used, being sprayed into the nares and pharynx. The former should first be diluted with four to five times its volume of physiologic salt solution. The latter may be administered full strength or diluted with three to four times its volume of olive oil.

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#### **Battle Creek Sanitarium Golden Jubilee.**

Names sometimes designate without adequately describing. Such is the case with the Battle Creek Sanitarium, which will celebrate the fiftieth anniversary of its founding on October 3, 4 and 5. This institution is a sanitarium, with all the most modern and scientific equipment for diagnosing and curing disease. But it is much more. From its inception, it has been in the forefront of the movement for natural, rational and physiologic methods in the treatment of the sick. Primarily, indeed, its function has been educational—the teaching of right principles of living as not only aiding in curing sickness but preventing its return as well. The sanitarium therefore has taken an active and a leading part in movements for public sanitation, for diet reform, to curb the liquor evil, to check tuberculosis, to abolish child labor and more especially to study tendencies toward race degeneracy and to point out eugenic and other remedies for them.

Being purely a charity and having no dividends to pay to stockholders, it has been able in the half century of its exist-

ence to spend over \$1,400,000 for the care of the indigent sick.

The program for the celebration includes a huge banquet, receptions, a big outdoor spectacle, a street pageant, with historical and allegorical floats, a race betterment exhibit, conferences on child labor, eugenics, tuberculosis and other sociological and medical problems of the day, with numerous speakers of prominence, and a health chautauqua.

All physicians are invited to come.

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#### **Immunity.**

The immunity conferred by the transfer of immune and of mixed immune and sensitized serums is the subject of an article by Henry Sewall, W. C. Mitchell, and Cuthbert Powell, Denver (Journal A.M.A., July 8, 1916). They relate their experiments undertaken to solve the following problem: "Given two guinea-pigs, one of which is hypersensitive to horse serum and the other resistant to it, does the serum of the latter animal contain anything which may neutralize or modify the admitted anaphylactic effects induced by the serum of the hypersensitive animal? An affirmative result would suggest the hypothesis of an 'immune body' functionally opposite in action to that concerned in anaphylactic reactions." They present their results as far as obtained on account of the necessity of indefinitely discontinuing the inquiry at the present time. It was undertaken with the idea of discovering whether or not the blood serum of guinea-pigs rendered immune to considerable intravenous injections of horse serum by a preceding course of nasal instillation of the serum has a different biologic effect from the serum of highly sensitive animals when injected intraperitoneally into normal guinea-pigs. They have found that the serum of animals which they call immune can confer on normal guinea-pigs a resistance against a long succession of intravenous injections of the same antigen. It is also probable that mixtures of immune and sensitive serums in certain proportions give still greater protection. Notwithstanding the



small number of these experiments, they believe that they justify the following conclusion: "A foreign protein injected into a normal animal sets up reactive processes leading to the formation, in this field, of two antibodies having opposite characters; one tends to induce, and the other to avert, the establishment of the anaphylactic state." Combination of these antibodies specifically modifies the metabolism of the body cells so as to give rise to hypersensitization on the one hand or to active immunity on the other and the authors say that if a clear interpretation of these results is correct, it is evident that new definitions must be given for immune serums.

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### **Tic Mechanism.**

C. P. Oberndorf, New York (Journal A. M.A., July 8, 1916), speaking of the contributions to the literature of tic by the French investigators, says that they fail to explain why the purpose of the psycho-neurotic manifestations and their various types when subsequently lost originally took the particular form exhibited in the individual case and why it has become lost to the patient's consciousness. He quotes the general view adopted by the freudian school in the tic mechanism as summed up by Ernest Jones: "Early in life an exaggerated divorce occurs between the instincts of love and hate, and the conflict between the two dominates the most important reactions of the person. The fundamental state of doubt—an incapacity for decision—results. The patient oscillates between not being able to act (when he wants to) and being obliged to act (as he does not want to). The tic symptom symbolizes the conflict of opposing forces." L. Pierce Clark has further furnished the analysis of three stubborn cases in which the malady was interpreted to be an auto-pleasurable act of sex significance, using the term in the broad sense of the freudian school. He emphasizes rather the auto-erotic gratification unconsciously afforded the tiquer by the act rather than traces the primary conflict in which the tic developed. It would seem that developing

in childhood as tics usually do it would be more satisfactory to study to determine their original purpose since the motives of childhood are simpler, more direct and transparent than those of later years. He reports cases of habit spasm which he claims show the tic to be essentially a defense reaction elaborated by the censor against a primary autopleasurable act and is a compromise, as most other neurotic symptoms are, to retain and at the same time abandon an act which was originally satisfying but has become objectionable as not harmonizing with the individual's ideas of propriety. Three cases are reported, one of thumb sucking, one of digging one's finger into the hollow the cheek and one of jerking the head to the right, all of which were inaugurated in infancy and are explained according to his theory above stated.

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### **Synthetic Substitutes Under the Harrison Law.**

The Harrison Narcotic Law, as is now well known, restricts the manufacture, sale or dispensing of "opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof" to persons registered under the act. The language is from Section I of the law. In all other sections, with a single exception, the drugs covered by the law are referred to as "the aforesaid drugs." In Section VI, however, after providing for the exemption of preparations containing minimum quantities of these drugs, the law exempts from the exemption "liniments, ointments and other preparations which contain cocain or any of its salts or alpha or beta eucain or any of its salts or any synthetic substitute for them." On the legal theory that a section of a law could be interpreted by a succeeding section, if the succeeding section were more explicit and illuminating in its verbiage, the Treasury Department issued Treasury Decision 2194, placing "alpha and beta eucain or any of their salts or any synthetic substitute for them" under the provisions of the law. To this ruling the Farbwerke-Hoechst Company, the man-

ufacturers of novocain, a synthetic substitute for cocain, took exception and, by agreement, a test case was argued before the United States District Court of New York. It is reported that the court took the case from the jury and ordered a verdict for the Farbwerke-Hoechst Company, on the ground that the text of the law did not include synthetic substitutes except in Section IV, where it was without force as far as the general construction of the law is concerned. This ruling is an important one, and it is probable that the case will be taken to the higher courts.—*Jour. A. M.A.*, July 15, 1916.

### Proteose Intoxication.

G. H. Whipple, San Francisco (*Jour. A. M.A.*, July 1, 1916), gives his observations and his experimental results in an article on the etiology of the proteose intoxication from intestinal obstruction, and remarks on the clinical features shown in peritonitis and pancreatitis which are similar to those in acute intestinal obstruction. The intoxication, he holds, in these three conditions is alike due in large part to toxic proteose. It can be shown conclusively that this proteose is not due to bacterial activity and therefore it must be derived from the proteins of the blood. The toxic proteoses isolated from the intestine, the peritoneum and the pancreas have certain biologic reactions in common but give no specific reaction to differentiate them. They give no anaphylactic reactions in guinea-pigs, no precipitins, no complement fixation. The blood of dogs injected repeatedly with proteose cannot destroy the toxic proteoses which are rapidly destroyed by the tissues of such animals in vitro. The proteose of intestinal obstruction resists digestion by intestinal

mucosa and pancreatic and tissue ferments. Any animal injected with one proteose becomes resistant, not only to resist this one but also to other proteoses. Proteose from human material injected into a dog will give tolerance to any of the proteoses obtained from the intestine or peritoneum of the dog or cat, and this holds good for all proteoses tested by Whipple. It is important to note, he says, that dogs with long continued obstruction or closed intestinal loops will survive lethal doses of pure proteose, with but few clinical symptoms of intoxication, and dogs recovering from a sterile pleurisy or peritonitis also show a like definite tolerance. All this evidence indicates that a proteose intoxication is present in these various conditions. Whipple believes that the proteose intoxication is the most important factor in the general intoxication noted in these conditions.

Many empiric methods, abandoned as irrational, have been revived and rehabilitated with basic scientific facts.

### WANTED—FOR SALE—ETC.

**FOR SALE**—My practice, office equipment, Ford car, residence which is just completed, located in a town of 500 inhabitants surrounded by as good farming country as in the state. My reasons for selling—I am taking up a specialty which necessitates my moving. Address "F," *Kansas Medical Journal*.

**DOCTOR**—Why not combine business with pleasure this summer and take a laboratory course in Los Angeles? For particulars, address C. A. Johnson, M. D., 1002 Burlington St., Los Angeles, Calif.

**FOR SALE**—Static X-Ray machine made by National X-Ray Co., Topeka, Kansas. This machine is new, never having been used. A bargain. Ed. C. Jerman, R. F. No. 1, Topeka, Kan.

**FOR SALE**—A Victor Finsen Light Apparatus. Will sell cheap. Address *Journal Kansas Medical Society*, Topeka, Kansas.

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# THE JOURNAL

*of The*

## Kansas Medical Society

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No. 9

### The Indications and Modern Methods for Blood Transfusions.

E. S. EDGERTON, M.D., Wichita, Kan.

Read before the Kansas Medical Society, at Topeka, Kan.,  
May 3-5, 1916.

Blood transfusion is a measure whose fields of usefulness and margins of safety are rapidly being worked out. Every month our journals are reporting successful cases and describing different methods and piling up a literature which shows that here is a therapeutic procedure which soon will be far more widely used than it has been in the past. The technique has been rendered more satisfactory, easier of general application, and safer in its employment. Necessary precautions against undue reactions are being studied and explained, so that the dangers are rapidly lessening, and there is a tendency more and more to use transfusion, not as a means of last resort, but as an ordinary therapeutic measure.

The cases in which transfusion is to be used fall into the following groups:

1. Anæmias.
  - (a) Acute.
  - (b) Chronic.
2. Surgical procedures.
3. The hemorrhagic diatheses, hereditary and acquired.
4. Blood diseases.
5. Infections.
6. Poisonings.

My work in this line has been very limited, yet my interest in it prompts me to bring the subject before the society at this meeting. Perhaps the most complete work in transfusion has been done by Ot-

tenberg and Libman, of New York City, many of whose case reports and conclusions I have embodied in this paper. I shall now summarize for you the results of transfusions reported in the recent literature.

#### I. (a) ACUTE ANAEMIAS.

Gastric and Duodenal Ulcer.—Twenty cases are reported of transfusion done for hemorrhage in these conditions. Nearly all were in desperate condition and actively bleeding when the transfusion was done. In each case the hemorrhage stopped. Three deaths followed, but all in operative cases, and these operations were done for other indications than hemorrhage. It has been advised against in the acute hemorrhage of ulcer lest it raise the pressure and continue the bleeding. However, if the anæmia is grave with active bleeding going on, I believe transfusion should be done, for in many instances it exerts a hemostatic effect as marked as its nutritional value. In the subacute and prolonged bleeding of ulcer, transfusion checks the hemorrhage. These individuals have a coagulation time which is not usually prolonged, but the thrombus formed lacks in firmness essential to checking the hemorrhage. Repeated transfusions of small amounts give best results in these cases.

Typhoid Hemorrhage.—Seven cases of typhoid hemorrhage with transfusions are reported. Two recovered, and from the severity of the cases, the transfusions probably were life-savers. One case died of perforation. Three died because the hemorrhage was too profuse, and in the

seventh case the hemorrhage stopped, but the patient died three weeks later of exhaustion. Two out of seven cases seems at first thought about what we could expect without transfusion, but these case reports indicate that in each instance the transfusion was a means of last resort. In the toxæmia of the typhoid state the nutritional value of the transfusion may be of life-saving value.

**Ectopic Pregnancy.**—Seven cases of ectopic pregnancy show that it is a condition for which transfusion is particularly suited either before, after, or during laparotomy.

(b) **CHRONIC ANAEMIAS.** Chronic anaemias, not including the pernicious type, are the result of repeated losses of moderate amounts of blood, and occur in malignancy, hemorrhoids, metrorrhagia, dysentery, tuberculosis, etc. These conditions are best treated by repeated small transfusions, which seem of value, more from their stimulating effect upon the hematopoietic organs than from their nutritional effect.

## II. SURGICAL PROCEDURES.

Surgical procedures of various kinds may, to advantage, often be combined with transfusions. Many cases may be made fair operative risks whose desperate condition would otherwise contraindicate any operation. For post operative hemorrhage transfusion is an ideal remedy. Of course, at the same time an effort must be made to check the bleeding point. Numerous cases of shock have been treated by transfusion. Here we meet with a disappointment. Practically every case has been a failure, death resulting without apparent effect. However, all these cases were treated late. Could the condition of shock have been anticipated, it is possible that better luck would have followed.

## III. THE HEMORRHAGIC DIATHESIS.

The hemorrhagic diathesis includes—

- (1) The hemorrhagic diseases of the new born;
- (2) purpura hemorrhagica and
- (3) Hemophilia.

All these conditions seem to yield much more readily to blood transfusion than to

human or horse serum used either subcutaneously or intravenously. Indeed, in nearly all the cases reported there was preliminary use of serum, and these transfusion cases were for the most part those in which serum had failed.

In melena neonatorum transfusions have given very striking results. The literature contains forty-one case reports with four deaths, and each death occurred in a syphilitic child. The new blood supply adds those elements which not only promote clotting, thereby causing the hemorrhage to cease, but at the same time increase the cellular elements and volume, and thereby enable the blood to carry out its functions in proper manner. In the case of bleeding babies it has been shown by Cherry and Langrock that the mother may safely be used for a donor without preliminary blood examination. A baby is usually to be given only about 60 or 70 cc. of blood, and practically every mother can spare this amount.

In the purpuras, transfusions have been used many times. These spontaneous hemorrhages occur in those whose blood shows a normal coagulation time and ability. The blood platelets, however, are usually greatly decreased. Transfusions have been done only in the severer cases. Mild types of the disease cure spontaneously. The prompt cessation of hemorrhage is very striking in most cases. It has not yet been explained how these cures are effected. We know that blood platelets are especially essential in thrombus formation. Mere coagulation of blood does not check hemorrhage. Purpuric blood coagulates in normal time. Therefore, it is not a question of lack of coagulative ability, as is the case in hemophilia. More probably there is inefficient thrombus formation, and this due, perhaps, to a lack of blood platelets. The transfusion supplies these platelets temporarily, but by what mechanism the organism regains an ability to form its own platelets is not clear.

In hemophilia transfusion is a specific for the control of hemorrhage. In the blood of the hemophiliac the substance



which activates the fibrin ferment is lacking. This is known under the various names of thrombokinase, thromboplastin, cytozyme, etc.

Transfusion stops hemorrhage by supplying this element, and our cures will only hold up to the time when the thrombin-forming substance introduced becomes exhausted and then hemorrhage may recur. Prophylactic small transfusions from time to time are therefore indicated, and several donors whose blood has been found suitable should be available for the emergency.

#### IV. BLOOD DISEASES.

In pernicious anæmia transfusion offers more than any other therapeutic measure, either with or without spenectomy. This disorder offers more difficulty in the selection of a suitable donor than any other type of case. Hemolytic reactions are relatively frequent when testing the blood of pernicious anæmia cases. More reactions following transfusions have occurred in these cases than in any other type. Transfusion probably never cures pernicious anæmia, but it does lead to remissions, and Percy reports an apparent cure after eighteen months observation. This condition should be met with frequent large transfusions.

The leukæmias do not yield to transfusions so far as any change in the leukocytic blood picture is concerned, but there may be temporary relief by combating the anæmia.

#### V. INFECTIONS.

In the infectious diseases there is reason to hope for good to come from the transfer of immune bodies. If we could get former erysipelas, scarlet fever and typhoid patients, for instance, to consent to be donors, we might hope to transfer antitoxic and bacteriocidal properties which would work wonders. Whole immune human blood should be more efficient than foreign immune serum, since we have reason to believe that the cells have an activity which the serum alone could not possess, and these cells remain active for a considerable time, whereas foreign serum is eliminated in a very short time.

#### VI. POISONINGS.

Poisoning by illuminating gas has been frequently treated by transfusion, and with excellent results. Prussic acid, benzol, and other poisons which act upon the blood might well be combatted with transfusion.

The dangers and complications of transfusions are due to (1) incompatible bloods, (2) dilatation of the heart, and (3) introduction of air. Of these the first is by far the most important. The serum of the donor's blood may hemolyze the corpuscles of the recipient, or vice versa—or agglutination of the red corpuscles of one or the other may occur. To guard against this, tests are carried out in the laboratory. Different proportions of the sera of the donor or recipient are mixed in small test tubes with .25 cc. of a 2 per cent suspension of the washed red corpuscles of the other. Controls are run of saline and corpuscles and mixtures of homologous serum and corpuscles. All are incubated at 37 degrees C. for two hours. Any hemolytic power that either serum possesses for the corpuscles of the other is indicated by a laking or solution of the corpuscles. This can readily be detected in the test tubes and contraindicates the use of this donor's blood. When the patient's serum possesses this power we meet the greatest danger of severe reaction.

Recently Rous and Turner have devised a rapid method for testing donors, using the ordinary white blood counting pipettes to make their mixtures and observing these under the microscope for agglutination. This will occur within fifteen minutes if at all. Now Moss has shown that hemolysis is always associated with agglutination. So that if at the end of fifteen minutes agglutination is not noted we can assume there will be no hemolysis. This makes a valuable method for use in the emergency, when to wait two hours for the other test would be wasting valuable time.

Lindeman, Lewisohn, Ottenberg and Libman state positively that if these pre-

liminary hemolytic and agglutination tests are properly performed, hemolysis in transfusion can be entirely eliminated. However, Satterlee and Hooker and Percy have seen marked reactions where the tests were carefully made and absolutely negative, and these occurring in about 5 per cent of cases. I have recently seen one such case in a pernicious anæmia.

When these reactions occur they begin with a chill and fever and vomiting. Maybe profuse sweating and respiratory distress. Often there is an alternating flushing and pallor of the skin. Hematuria is marked, and in the severer cases bleeding from the uterus, mouth, bowel and subcutaneously is seen.

It seems to me that there must be other factors involved, than simply the reaction of hemolysis, to explain these toxic manifestations. Perhaps, as suggested by Satterlee and Hooker, there is a splitting of the serum protein with rapid liberation of poisonous serotoxin which causes an anaphylactic reaction. Perhaps there is some antigen in the serum which is harmless to its own protected cells, but toxic to the exposed cells of the other. Perhaps it is due to the introduction of blood which, although perfectly fluid, may nevertheless be undergoing incipient coagulative changes due to physical or chemical influences to which it is subjected in process of transfer. This is the objection raised against the citrate method of handling the blood. Sodium citrate inhibits coagulation because it binds the calcium of the blood, and calcium is essential to clotting. However, there is nothing to prevent the formation of thromboplastin and other coagulative changes from taking place in the shed blood. I believe, then, that our transfer should be made with the least possible delay and unmixed with any toxic foreign substance, no matter how small the amount.

Now, in closing, a word as to different methods of transfusion. These are many. In general they fall into two groups—the direct and the indirect.

*Direct transfusion* is being very little

used today owing to technical difficulties, to the uncertainty as to the amount of blood being transferred and the usual necessity of sacrifice of an important artery of the donor. The Crile, Elsberg and Brewer canulae, or the McGrath forceps are all clever means of anastomosis, and have given some excellent results. In using the direct methods, I have fallen down completely in two cases and am now using only the indirect methods.

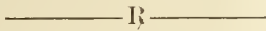
*The indirect methods* are much better adapted for general use. The use of the large canulae of David and Curtis and the Kimpton tubes are very satisfactory and simple procedures. Lindeman's method of using a dozen or so 20 cc. record syringes to transfer the blood from a canula in a vein of the donor to one in the patient is the most simple, and for many conditions the best method ever described. The transfer is rapid, insuring little if any change in the blood outside the blood vessels.

However, my method of choice is to use the apparatus devised by Unger. This consists of a four-way stop cock, which is connected with an aspirating record syringe and a syringe of saline which latter is constantly slowly flowing, first into patient then into donor. By rotating the stop cock the blood current is directed from the donor to the recipient, propelled by filling and emptying the record syringe. A spray of ether plays on the barrel over the metal piston of the syringe to keep the piston from expanding with the blood heat and to hinder any coagulative changes. With ordinary care very excellent results can be obtained with this apparatus. The donor's vein should be of good size, else it may collapse over the end of the needle, stopping the intake of the blood.

The use of anticoagulants, of which sodium citrate in .2 per cent strength is the most widely used, I have never tried, except in some experimental work on dogs. The technique is very easy, and I have never seen any bad effects. Lewisohn's results are very tempting, and yet some untoward results are reported by others who have used the method.



I have had some very excellent results with transfusion, and I am convinced that it is a procedure which in the future will be much more widely used than it has been in the past. However, it must be used only after careful and reliable laboratory tests of the blood have been made. In my own experience the Unger method has proven the best solution for the many technical difficulties.



### Fractures.

R. C. LOWMAN, M.D., Kansas City, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

The consideration of the subject of fractures has always been of great interest to the medical profession, and much has been added to this interest in the last few years by the development of operative interference in the treatment of fractures, and by the increasing number of damage suits caused by a combination of snitch lawyers and imperfect results.

As to the various aspects of open treatment of fractures, there has been much written, and there are many and varied opinions, but as usual in such cases, a sane average of these somewhat conflicting opinions is about the best course to pursue.

Some operators advocate interference in the treatment of most closed fractures, while others claim that only three or four per cent of all cases will need open operation.

The indications for open treatment are given as follows: "In fractures of the shaft of long bones where reduction can not be secured and maintained by closed treatment; second, where soft parts are interposed between the ends of the fragments; third, in cases with marked rotation of the fragments; fourth, fractures of both bones of forearm or leg; fifth, fractures in or near joints where fragments can not be brought into proper position to secure anatomical alignment. Malposition of fragments near joints generally cause excessive callus, which together with the projection of fragments often produces

much limitation of motion and poor functional results."

The general condition of the patient is an item of considerable importance. The very old are poor subjects for open operation, and imperfect physiological results are not nearly so disabling as they would be in a young, vigorous laborer. One should also be very careful before advocating open treatment in patients afflicted with diabetes, cardiac or renal disease. The very young are also poor subjects for open operation, and we should also remember the marked tendency of Nature to smooth over bumps and do away with disabling callus and adhesions in this class of cases.

What are the objections to the open treatment? First and foremost is the danger of infection, and this is a very real danger. We should always remember that the operative technic in the open method of treatment of fractures is very difficult and exacting, and any deviation from it is very likely to result in infection of the wound, imperfect functional condition, possibly death of the patient and a besmirched reputation for the surgeon. The pioneers in this field have worked out a very exacting technic, including careful cleansing of the operative field, the use of gloves, never permitting the gloved hand nor any instrument nor sponge which has touched the gloved hand to enter the wound.

A sterilizer is kept going throughout the operation, and whenever an instrument is used it is dropped into the sterilizer to be removed by a special nurse, and placed on the tray for the operator, to be resterilized if used again during the operation. All sponges are handled with forceps and are not touched by the gloved hand. All this requires patience and training very difficult to attain by the ordinary operator.

Lane states that when infection occurs or plates have to be removed, one knows that these results have been caused by gross carelessness on the part of the surgeon. They are due to the want of observation of the simplest rules of asepsis and lack of knowledge of the simplest me-

chanical principles and want of skill and ingenuity.

He deprecates very forcibly the use of excessive force, especially powerful traction in place of skillful manipulation, and states that one source of failure is the use of ridiculously small plates.

His remarks are rather hard on the average operator, for there are numbers of reports where forty or fifty per cent of the plates have had to be removed subsequent to operation, and I have seen quite a number removed in the cases I have witnessed and done in my own work.

Another point which seems to have been worked out is that a metal plate placed on a fracture inhibits osteogenesis on that side of the fracture, while it may be active on the opposite side. This is sufficient to cause a non-union in a certain proportion of cases.

Albee makes the statement that in old cases of non-union there is always a sclerosis in the fragment ends, extending in some cases over one and one-half inches from the end. Even when these ends are freshened in the usual way, and a metal plate or other appliance used, osteogenesis is not active enough to produce union.

Some surgeons operate immediately or quite soon after reception of the injury; others wait eight or ten days, the majority advocating operation about five to seven days subsequent to date of fracture. In this connection it is well to remember wound conditions following fracture, namely, first to fourth day infiltration of tissue; fourth to twelfth day gradual absorption of exudate and blood and its replacement by connective tissues; twelfth to eighty-fifth day stage of reorganization, augmentation of callus where most needed and absorption where not needed.

Hitzrot states that until the third month there is nothing but cartilage or connective tissue across the line of fracture.

After all is said the great majority of fractures will be treated by the closed method as of old, and by men not especially trained in operative technic and generally amid surroundings making impossible the

carrying out of the technic even by Lane himself.

I wish to emphasize the importance of a careful physical examination of every fracture case, using an anesthetic wherever any difficulty or doubt exists.

The help of an X ray is almost invaluable, and we should avail ourselves of this agent whenever possible.

An anesthetic is especially indicated in fractures in the proximity of joints, for nowhere is reduction of fragments more important. A small piece of bone impinging against an articular eminence or a tilted fractured joint surface often cause extensive and lasting diminution of function.

In fractures of the tuberosities and neck of the humerus many are advocating open treatment and nailing of the fragments. My personal experience with the closed method has been fortunate, but I have been especially careful to secure reduction and watch the case carefully for eight or ten days to see that reduction is maintained. In this locality one should always keep a sharp lookout for dislocation of the head with coincident fracture. The X ray is a great aid, and should be used especially if any doubt exists.

Most of the fractures around the elbow, except of the olecranon, are being treated in the position of acute flexion or Jones position.

In a recent article in the Journal of the American Medical Association, a number of cases treated in this manner were reviewed, together with X rays and photographs, and the results were excellent as to function, which after all is the acid test as to the usefulness of any method of treatment. The authors of the above-mentioned article use slight passive motion very early, in some cases in forty-eight hours. This is contrary to most writers, though early passive motion short of producing pain, and massage are being used much more frequently than ten years ago. Forcible movement of the joints and so-called breaking up of adhesions in three to six weeks after receipt of the injury does



more harm and produces more anklyosis than anything else in elbow fractures, with the possible exception of absolute non-reduction of fragments.

Quite a number of authorities are advocating open operation and nailing of broken fragments in position, claiming that this results in better function, less callus and adhesions.

Nearly all cases of fractures at the lower end of the radius can be treated by the closed method, yet in this location the late results of non-reduction and improper treatment are more frequently open to inspection by the public than in any other part of the body. In reducing Colles fracture we should bear in mind that the entire styloid process of the lower end of the radius is always distal to a line drawn at right angles to the long axis of the radius and just touching the lower end of the ulnar styloid process.

In the consideration of the fractures around the ankle joint, opinions differ from those of a few years ago. The classical Potts fracture is rare compared with other forms, one set of statistics giving one case in sixty, and another set two in thirty-six cases.

By typical Potts is understood a fracture of the fibula above the joint with tearing of the internal lateral ligaments, producing an eversion of the foot. Yet most of the deformities I have seen following fractures around the ankle joint have been those distortions commonly supposed to follow Potts fracture, namely, persistent eversion of the foot with more or less backward displacement of the foot. The fracture occurring most frequently appears to be fracture of both malleoli; others common are fracture of external malleolus of fibula above the joint, and supra malleolar fracture. Different writers adopt slightly different classifications.

Murphy emphasizes a point which seems to me to be very important when he describes inversion fractures, where, at the time of injury, the foot is inverted by direction of the force and the astragalus and foot are forced to the inside. He de-

scribes and shows pictures of several such cases treated by the usual adduction inversion or Dupuytren's splint where the effect of the treatment was simply to drag the foot and astragalus further out of proper line and cause the patient to recover with a foot permanently inverted.

These ankle-joint fractures should be carefully examined and X rayed. The articular surface of the tibia should be in the same line as the articular surface of the astragalus, and not tilted to either side. A line through the center of the articular aspect surface of the tibia should pass through center of astragalus and not to one or the other side of center. In cases of ordinary deformity following these ankle fractures, where the patient has a tendency to walk on the inner side of the foot, this line will be seen to fall to the inner side of the center of the astragalus, and in the type of inversion fracture described by Murphy to the outer side.

We should be very careful to ascertain the pressure of any backward or forward dislocation of the astragalus, and this can be best shown by lateral radiographs. If the joint surfaces of the tibia and astragalus are in correct relation, we will have a good weight-bearing foot.

The treatment of these fractures is not so simple as a few years ago when it was taught that about all that was necessary where there was an eversion fracture was to use a Dupuytren's splint, being careful to reduce any dislocation of the astragalus and foot and prevent any dropping of the foot beyond a right angle with the leg. Time will tell whether the general practitioner will get as good results treating his ankle fractures other than simple Pott's in straight or nearly straight position, as is advocated largely by writers of the present.

Cases requiring open treatment are fractures of both bones near the joint where they can not be kept in apposition; second, posterior or anterior splitting fractures of the articular surfaces of the tibia where there is coincident dislocation of the astragalus; third, any case where it is im-

possible to get the joint surfaces of the astragalus and tibia into correct relation and keep them there.

A mistake often made is to let patients walk too soon after ankle fractures. Too early resumption of weight bearing may gradually destroy soft fibrous unions and allow distortions of articular surfaces and broken fragments that were originally correct or nearly so. From seven to ten weeks is usually required before the weight of the body can be safely placed on the foot, and we should be guided largely by the tenderness, pain and reaction to use in determining proper time for resumption of walking.

In conclusion, I may state that in my opinion, the best results will come to the average man by painstaking care in the examination of cases, using an anesthetic and X ray wherever the least doubt exists as to the condition present or the correct reduction of fragments.

Concerning the newer methods of treatment in any given case, we should weigh carefully the evidence as to age, environment, occupation and general condition of the patient, and especially our ability to follow the exacting technic worked out by the experts in this field.

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### Team Work in Medicine.

J. T. AXTELL, M.D., Newton, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

Doubtless there was a time within the memory of some present when practically the whole field of medicine could be fairly well covered by one man. But whether or not it could have been done in the past, it is evident to any thinking person that it could not be done now. The literature on any one branch of medicine is now so extensive that the average lifetime of an individual is scarcely long enough for him to cover it.

To be posted on any subject one must know what others have learned about it. No one can discover everything for himself. To a certain extent we are able to begin where the other man left off, or there would be little progress.

Not only is this true of the literature, but the mechanical part of the work, the training of the hand and eye, requires years of time and experience to become proficient. We do anything well by doing it often. Think of the years of time that must be spent in a laboratory before one is competent to pass on the pathology of tissues alone! The intricate examinations of the blood and other fluids and secretions of the body not only require years of preparation, but require constant practice of a large number of cases to be done with even an ordinary degree of certainty. You would not dare trust a Wassermann to a pathologist who made one or two a year. After years of preparation, constant practice is necessary for proficiency.

The same thing is true of X-ray work. The man who makes an occasional radiograph is not so competent as the one who makes them every day. The work with the screen in examination of the lungs, pleural cavities, of the stomach and intestines after Barium meals, requires much time and thousands of cases to properly interpret the findings.

Cystoscopic examinations can not be mastered by any one at will, but require study, time and many cases and almost constant practice, not only for the mechanical dexterity, but to learn to know the significance of what you see.

Not many general practitioners are competent to spell out what is indicated or what lesion or pathology causes certain tremors or paralysis of different parts of the body as a nerve specialist will do. In fact, it is notorious how little the average medical man knows of nervous diseases compared with what could be known or is known by those who have given their lives to this study.

About the only specialty recognized by the laity is that of the eye. Usually a man with a sore eye will hunt up an eye doctor. And most of us are so incompetent to use an ophthalmoscope and have had so little training and experience in eye diseases that we are perfectly willing he shall do so. Then the eye is rather a prominent organ,



and success or failure is so evident to the patient himself and to his friends that we do not care for the responsibility.

How different it is with hidden organs! How glibly we can tell a patient that his "liver is torpid" (whatever that may mean), or that he has a "catarrh of the stomach" or his kidneys are "out of whack." Almost any pompous-sounding phrase accompanied with a prescription or a bottle of medicine, and the patient is sent away. Yet you and I know that almost any case that comes to us with a pain, it may be in the head or in the side or in the stomach, may need the most careful laboratory, cystoscopic or X-ray examination to determine the nature of his ailment.

Fully twenty-five years ago a prominent surgeon said in my presence, "The future of medicine, as I see it is in team work." This remark made a deep impression on my mind, which has been lasting. Its truth and wisdom have been verified.

By team work—by a division of labor—each man will be able to do better work. You have not quite done your patient justice unless you have given him the best he could get for his money. Dr. Richard C. Cabot says, "Peddling medicine from house to house is the most expensive and inefficient method that could be conceived." He believes in a division of labor among physicians, in hospital practice, where a patient may come and get a really scientific and up-to-date examination by a number of doctors, each of whom limits his work to certain lines of medicine and does not try to cover the whole field. If some kinds of work are better paid than others, the fair way is to pool the earnings and divide the proceeds.

In any good town of two thousand or more inhabitants a hospital could be supported with a good laboratory, X-ray outfit and all the apparatus necessary for examination and treatment, whether surgical or medical. The expense to each physician is so much less that a better outfit can be afforded than if each tried to own one for himself. If all try to be eye and ear men, or nerve specialists, or ob-

stetricians, or surgeons, or genito-urinary specialists, the result will be that no one will ever get to be very proficient in any line of work, and the public will suffer for it or will go to some other town where they can consult a doctor, who, by limiting his work, has done more and studied more and thereby become more proficient. In this way the small towns lose their best-paying patients.

In any town with from two to four physicians and possibly a dentist, it would be more economical to have a good common waiting room, a stenographer for bookkeeping and telephone calls, each physician having his own private office in the same building, and work in partnership. The saving in country drives over the same road and the chance to do a certain amount of specializing are some of the advantages.

Physicians working together in this way could take turn about attending clinics and keeping up to date, and bring home to the others the newest thoughts, renewing the enthusiasm of all concerned. The dividends or pay of the physician attending clinics should go on just the same as if he were at home.

The greatest trouble with all of us is that we stand in our own light and by our selfishness defeat the very object we are working for. It would be to our financial as well as intellectual and moral benefit to work together. We must get a wider, clearer, saner view of the situation and lay aside our prejudices, our strifes and our jealousies and by working together, we will accomplish more for ourselves and much more for our patients. As Cabot says, we will have "better doctoring for less money."

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It is surprising how closely the clinical observations of the early day practitioners coincide with the results of modern research.

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### Some Obstetric Emergencies.

F. T. VAN EMAN, M.D., Kansas City, Mo.

Read before Franklin County Medical Society, March 29, 1916.

The management of a perfectly normal case of pregnancy and labor is, relatively speaking, a simple matter, in fact the labor will almost always take care of itself.

The pregnancy will also in the large proportion of cases, do the same, and all that will be required will be the careful supervision of our patient throughout the course of her gestation, a careful watch for unfavorable signs or danger signals, and an examination shortly before labor, to determine presentation and position, and any other condition which may be prejudicial to a successful and normal labor—this being especially desirable in first pregnancies. In other words, we should not permit our patients to go into labor blindly.

Unfortunately, of all the branches of medicine, obstetrics has been, and still is, the slowest and almost the last to assume its proper and dignified place, and many of our patients still believe that the onset of labor is the proper time to employ the doctor. Through the efforts of the physicians as a whole, and to those of well-meaning, but sometimes misguided lay papers and magazines, there has been in recent years a marked educational progress along these lines, and we hope the day is not far distant when obstetrics will attain the position it so justly deserves, and the attendant will be considered "worthy of his hire."

It is a regrettable fact that today the removal of a finger or toe is a more dignified procedure (commercially speaking), than is the delivery of a woman, even of an abnormal case.

While normal cases pursue such a satisfactory course, yet we will occasionally encounter an abnormal one, which, often on the spur of the moment, gives rise to an emergency that will tax the skill and ingenuity of any man, which will place the patient's life in instant jeopardy, and where a successful issue depends upon a cool head, quick thinking, and instant action. It is of this class of cases, of greater

or less degree, that I wish to speak at this time.

We have always been assured that about 85 per cent of all cases of pregnancy and labor were normal and that, of the remaining 15 per cent, Nature, if undisturbed, would correct a very large per cent before the birth of the child. We can still rest assured that these figures are fairly correct, although it seems to me that there is a slight tendency towards a reduction of the normal percentage usually given, as time goes on and to bear me out in this idea, I wish to give, in part, the statistics which appear in the report of the New York Lying-in Hospital made in the last issue of their "Bulletin."

From October 1, 1913, to September 30, 1914, are reported 6,277 births, and of this number 5,347 cases are recorded in which the presentation was observed. Of this latter number 80.21 per cent were vertex cases, but only 78.13 per cent were occipito-anterior cases, left positions predominating as usual. The remainder were either posterior or transverse. Thus we see in this group of cases quite a decided reduction from the normal 85 per cent.

From these few foregoing statistics, it will be seen that, while such a large percentage of our cases terminate normally and happily, yet we must not be over-confident, nor must we ever be caught off our guard. The following cases will serve to illustrate several different types of obstetric abnormalities or emergencies and to illustrate also what has been said regarding watchful prenatal care and guarded attention in the lying-in room.

The first case was one of a concealed post-partum hemorrhage; Mrs. X., age 22; a strong, robust woman; second pregnancy and attended by the writer in both events. Pelvic diameters above normal; her first gestation was normal; the child weighed eight pounds; labor began with a vertex presentation and an L. O. A. position. In spite of vigorous uterine contractions and voluntary effort and after complete effacement and dilatation of the cervix, the head refused to advance to the perineum, the



occiput hanging persistently on the pubic bone. She was anesthetised and forceps were applied, when with a slight forcing upwards and then traction towards the sacrum and downwards, the head came out from under the pubic bone, after which the forceps were removed and the labor terminated with ease. No postpartum hemorrhage occurred and puerperium progressed satisfactorily.

Her second pregnancy was rather stormy, several times an early termination seemed imminent, and about the end of the third month she felt sure that the sac had ruptured and that the waters had escaped. Labor began this time on the 5th of July, 1915, with a vertex presentation and an L. O. A. position. The sac was intact and ruptured in due time, thus probably proving that she had been mistaken, although several of my cases have had a similar experience. The pains were strong and vigorous, yet the same condition arose as before and it was again necessary to apply the forceps to release the head after which, the forceps being removed, the labor terminated quickly and easily.

The placenta was delivered spontaneously in about thirty minutes, the uterus contracting normally. As per usual custom, she was given one drachm fl. ext. ergot following the expulsion of the placenta and the uterus was held firmly in the grasp of an assistant for thirty minutes. Conditions were now satisfactory. It being my custom to remain in the house for at least an hour postpartum and to occasionally drop into the room so as to ascertain the patient's condition, I found, upon stepping into the lying-in room, about an hour after delivery, a suspicious pallor upon my patient's face. She complained of being thirsty and then of being hot. Her pulse, which had a few minutes before been 80 was now 130. Quickly throwing back the covers and laying aside the occlusion pad I found, to my surprise, no unusual bleeding. Quickly palpitating the abdomen I found that, instead of being well contracted and well below the umbilicus, the uterus was far above, enormously bal-

looned out and softened. Grasping the uterus laterally, force was applied towards the center and downwards, no force being applied on the fundus for fear of causing an inversion of the uterus. I was soon rewarded by filling a nice clean bed with blood and clots. Maintaining the hold on the uterus, both ergot and pituitrin were given hyperdermically, after which, the usual care, postural and otherwise.

Convalescence subsequently was satisfactory except that, for several days she ran a low temperature, as frequently happens in a case where there has been too much blood lost and thereby much resistance.

This case brings out several points: First, that external evidence of postpartum hemorrhage may be wanting, and yet our patient may have a concealed hemorrhage which may result seriously. Second, that the condition does not necessarily follow an inertia, in fact it may be the other way round and be the result of muscle fatigue following very vigorous uterine contractions. Third, we must take into consideration the possible effect of the anesthetic. Fourth, that we should never be in too big a hurry to leave our patients when our duties are apparently over.

The etiology of postpartum hemorrhage embraces a number of conditions, of which uterine atony is only one, and we must remember that injuries from operative deliveries, such as extensive tears and uterine rupture, especially of the lower segment, together with retained pieces of placenta, are often responsible as well, but as this paper deals with obstetrical "action" only, we will pass onto case No. 2, which was a case of placenta praevia centralis.

This case, a Mrs. Y., 30 years of age, became pregnant for the third time following her February, 1915, menstruation. Her previous labors had been normal, her first puerperium, however, being complicated by a double mammary infection. Pelvic measurements showed a slight shortening in the antero-posterior diameter, but not sufficient to cause trouble as evidenced by her two previous successful labors; thyroid

gland somewhat enlarged, but giving no trouble. Gestation proceeded normally up to August 13, on which date she was awakened at 4 a. m. by a gush of amniotic fluid and quite a little blood, but there was not a pain of any kind.

De Lee's dictum that "a painless causeless hemorrhage, occurring in the last semester of pregnancy, is almost pathognomonic of placenta praevia," at once came to my mind. Accordingly the patient was kept quietly in bed for the next 24 hours, during which time there was no recurrence of the bleeding. Often in these cases, we will find the cervix somewhat dilated and so softened that we may pass a finger through and find the lowly placed placenta; such, however, was not the case here.

To my mind there is no "watchful expectancy" treatment in cases of placenta praevia at any stage of gestation either proven or suspected, my policy being to empty the uterus as quickly as possible, and in this case my suspicions were so strong that at the end of 24 hours I proceeded to make certain as to the real condition at hand.

As soon as the dressing forceps reached the internal os, I was rewarded with a gush of blood. I now packed the cervix tightly and next the vagina, and then waited for another 24 hours, at the end of which time there were no developments except a further softening of the cervix. The tampons were now removed and upon the first attempt to renew the one in the cervix, there was a most violent hemorrhage which very quietly gave my patient the characteristic signs. Quickly packing the vagina, I sent for my assistant and under a general anesthetic we were able to dilate the already softened cervix. A centrally located placenta was found. After dilation was completed one edge of the placenta came down to the external os. Pushing by, the feet were grasped, the child quickly delivered and then the placenta. Fortunately we had very little further bleeding.

Convalescence was normal in every re-

spect and I cannot help but call attention to the most certain benefits of a strict surgical technic in all obstetrical work. This patient was shaved and prepared as for any major surgical operation and sterile gowns and rubber gloves were worn by the operators. Although the patient was in her own home, nothing was done that cannot be done by any one in almost any environment. It just takes a little more time and a little more work, and it pays, and pays big.

This case brings out at least two points: First, the great value of surgical principles, as applied to our obstetrical work, and second, that in a case which has been going along calmly and serenely, there occurs suddenly a uterine bleeding without pain and without apparent cause, we must not overlook the strong probability of a placenta praevia, for our patient's life is often at stake. Apropos of this last statement, the maternal mortality in these cases ranges from 7 to 19 per cent in various series of cases reported and in a total of over 18,000 cases the mortality was 11 per cent. The foetal mortality was also very high, 56 per cent. In the case reported the child was not viable and lived just about thirty minutes.

Case Number 3 brings us in contact with another complication and deals with a gestational toxemia and that most awful condition, puerperal eclampsia.

Mrs. Z., age 21; primipara; expected labor October 22, 1915; placed herself under my care in May. At this time physical examination showed a very small but fairly well nourished young woman; thyroid somewhat enlarged; eye-balls rather prominent; pulse 88 to 90; heart action somewhat irregular; a systolic murmur heard best over cardiac apex, in the left axilla and at the lower angle of the left scapula; no evidence at this time or later of compensatory failure; a history of several attacks of tonsillitis but none of acute articular rheumatism; pelvic diameters all below normal, but no disproportion existed; blood pressure 118; urine normal in character and quantity as per



24-hour measurement.

Her gestation progressed normally up to September 15, excepting for a slight increase in blood pressure during July and August, ranging then from 125 to 130.

The specimen of urine sent in on September 15 showed a large amount of albumen, but only a few narrow hyaline casts. Ninety-two ounces of urine were voided in the next 24 hours with less than 1 per cent urea. Besides a slight puffiness of her eye-lids, there were no other pre-eclamptic signs.

Under a restricted diet and active eliminative measures, she went along from day to day feeling fine and passing four to five pints of urine per day, all of which still contained an abundance of albumen but no further casts were found.

September 22. One-fifteenth of 1 per cent albumen by weight (Esbach test) B. P. 150.

September 25. One-fifth of 1 per cent albumen by weight (Esbach test) B. P. 150.

September 28. One-half of 1 per cent albumen by weight (Esbach test) B. P. 160.

I neglected to state that on the day albumen was first found, her blood pressure had risen to 145. It is interesting to note the daily increase in the amount of albumen as estimated by the Esbach test, and the corresponding rise in the blood pressure. On the day when albumen and blood pressure registered highest, September 28, she did not feel so well, though her kidneys were still active and there was no oedema. At 10 p. m. of this same date she had her first convulsion, within the next hour she had four more very severe ones, and two light ones; pulse was 130 and rather full, though not enough so as to indicate bleeding. Twenty drops of *tr. veratrum viride* and thirty minutes later one-half grain morphia, both hypodermically, brought her pulse down to 58 at the end of an hour, after which time she had no more seizures.

She was now taken to the hospital where after a proper toilet, my first vaginal ex-

amination was made. In the morning preceding her first convulsion, I had tried to make out the position and presentation of the child by abdominal palpation and auscultation, but the child was very small and while a vertex presentation was determinable, yet I was confused as to whether the occiput was anterior or posterior. The foetal heart being so located as to suggest an anterior position, this diagnosis was tentatively made. At the hospital I found the head well down in the pelvis and the cervix slightly dilated and softened. With very little effort the cervical dilation was completed and then a left occipito-posterior position was found. The head being so small and although knowing that the pelvis was also very small, I still thought that delivery with forceps could be made without correcting the position, but in this I was in error. With some little difficulty, the sac having been ruptured, rotation was accomplished by external and internal manipulation, after which the delivery was easily made. The child was nearly a month premature, weighed three pounds and in all respects was apparently dead. Fortunately a pulmotor was at hand and by its aid we were able to resuscitate it. It is still living, and is gaining rapidly.

No post-partum convulsions occurred and in less than a week's time the urine was perfectly free from albumen, and convalescence was uneventful.

The points which I wish to make in this case are first, that whatever the theory, or theories, may be as to the cause or causes of eclampsia, chemical or otherwise, we know that after all the cause is "pregnancy," and as in any other condition, the cause having been determined, the method of treatment is obvious.

Pre-eclamptic conditions up to a certain point may be treated along the well known medical lines, but beyond this point or after true eclampsia supervenes, there is to my mind but one remedy, a termination of the pregnancy in the quickest and safest manner possible.

The second point is, that in the absence of certain of the characteristic pre-

eclamptic danger signals, such as headache, visual disturbances, oedema, and a diminished output of urine with casts, we must not feel too confident, for without these we may have, as in the case just reported, a true eclampsia. A rising blood pressure and an increasing albuminuria, even in the absence of other signs, should put the patient to bed under a rigid diet and brisk eliminative treatment and if, in a reasonable length of time, improvement does not ensue, pregnancy should be terminated without further delay. Neither must we forget that the result of our vigorous treatment, if too long continued, may be harmful in itself.

The third point is, that in this case, we had a lesson in the mechanics of obstetrics and were taught the truth of that old and homely saying that "a square peg cannot fit and pass through a round hole." The forceps were easily applied to the head in its posterior occipital position, but this very small three-pound child's head simply could not be delivered until it was rotated into an anterior position, or until the smallest diameters were brought into relation with the largest diameter of the mother's pelvis, when it then came through with perfect ease.

Case Number 4 was also one of eclampsia, and while it presents no unusual features as far as the eclampsia is concerned, the method of delivery differed from that usually followed, and in fact, from that usually required. Cesarean section, years ago, was a last resort after everything else had been tried—forceps, version and what not. The woman practically always infected and almost as surely dying.

Now with modern technic and hospital facilities, plus more careful study of our obstetric patients, Cesarean section has broadened very much in its field of usefulness and the number of indications for this operative procedure has increased. Scarcely a single series of cases reported can now be found without eclampsia and placenta praevia being in one or more instances given as the indication for the section.

This case was one under the care of one of our best men, a primipara, age 20; and according to her dates was nearly at full term. Gestation up to November 21 had been perfectly normal, urine always negative and blood pressure 118 to 120. November 21 she was seized with a violent frontal headache, urine loaded with albumen and casts. Face oedematous, blood pressure 145, no convulsions. She was treated along the usual medical lines for three days, but conditions remaining unchanged, she was brought to the hospital on the evening of November 23, at which time the cervix was firmly tamponed by her physician in the hope of starting labor. At the end of twelve hours, or at 9:30 a. m. November 24, she had her first convulsion, from which time one convulsion followed another in rapid succession and with increasing severity. Preparations for a Cesarean section were now made and the patient taken to the operating room. We now found that the cervical tampon had practically accomplished nothing; the cervix was exceedingly rigid; the deepest surgical anesthesia was necessary to prevent a convulsion; manual dilatation promised long and tedious delay with a prolonged anesthesia and injury to maternal tissues through efforts at dilating and the resulting high forceps delivery or even version. All this together, with the danger to the child, made Cesarean section the procedure of choice. This I did quickly and without trouble, the patient returning to her bed in good condition. Six hours later she had another convulsion and within the next four hours six more seizures occurred. She was given 10 to 15 drops of Norwood's tincture veratrum viride every half hour hypodermically and one single dose of morphine (one-half grain). When pulse reached 60, no further convulsions occurred. Croton oil and other eliminative measures were rapidly carried out, and convalescence was soon established. She left the hospital two weeks later with her baby, and at last report, one year after operation, was in good health.



Point one, in this case, is that we must be eternally on the watch; a thunder clap may come from a clear sky. This case was on perfectly safe ground until the very last when suddenly the toxæmia appeared, and then the almost inevitable explosion. Point two, vigorous medical treatment often brings the case under control and labor sets in and terminates successfully, with no further disturbance, but not always, therefore we must not depend on it for too long a period of time. Point three: In many cases where convulsions supervene, we will find active labor in progress and often what I call an unconscious labor is going on, as in one other case which had had several convulsions and had been brought into the hospital, at which time I found that cervical dilatation had been nearly completed, yet the patient showed no evidence of being in active labor and afterwards said she felt none. She lacked nearly a month of being at full term. We, however, will occasionally find a case with a hard, rigid cervix, which promises long delay in securing complete dilatation (and this must absolutely obtain before delivery is attempted), with convulsions following one another with increasing severity and great difficulty of control, where bleeding is counter-indicated as it is in some cases, where if the child is alive and viable and if the treatment already carried out has not made the patient liable to infection, or if her condition does not otherwise counter-indicate surgical interference, a Cesarean section will undoubtedly give both the mother and child the best chance.

The next and last case is a decided abnormality, but becomes an emergency, as a rule, only when the attendant has neglected to determine the presentation of the child before the onset of labor.

Early in pregnancy the foetus lies transversely in many cases, in multipara, often during the last month, but as a rule, before labor begins the foetus takes its normal position with vertex at the inlet, or possibly the breech. Any condition existing which prevents this final correction—for example a contracted pelvis, hydram-

nios, malformations of the uterus, twins, a multipara with a pendulous abdomen—may give rise to a transverse presentation, a shoulder usually presenting at the inlet with the scapula determining the position, right and left, scapula anterior or posterior, as the case may be. Spontaneous delivery is rare and practically always interference must be resorted to. This case was seen in consultation for the first time six hours after the onset of labor. A Jewish woman, 32 years of age, in her sixth labor, one of which resulted in twins, perineum badly torn with her first labor and never repaired. Labor was ushered in by a rupture of the sac and escape of the amniotic fluid. Her physician had made a vaginal examination and, mistaking the elbow for the ischial tuberosity, concluded that a breech was presenting. An hour later an elbow could easily be made out and it was possible now to run the fingers up the arm to the axilla and to feel the ribs, also the fingers and palm of the corresponding hand. It was a transverse presentation, with a right scapula, posterior position. By this time the arm and shoulder had passed the cervix, and now we were certainly up against an obstetric emergency. A transverse position, arm and shoulder prolapsed, cervix retracted, bag of waters ruptured and uterine wall firmly adapted to child's body. To this, add the difficulty of a version after rupture of the sac, and the danger of rupturing the uterus, and more remotely the danger to the mother from exhaustion and infection.

Delivery by a mutilation of the child or one by abdominal section, either straight or Porro, of course must come up for decision, and at once. Finding that the very capacious vagina offered me plenty of working space, I decided to attempt a restoration of the child to the interior of the uterus, and to do a podalic delivery. Under deep surgical anesthesia, which gave us the maximum of relaxation, I slowly and carefully worked the prolapsed arm and shoulder back, and was finally rewarded by its slipping into the uterus,

after that I grasped the feet and delivered with no further difficulty. The child was injured in no way, although at first it was very blue and limp, requiring a few minutes' active work to bring it out all right. Nor was the mother injured in the least, her convalescence being perfectly normal.

There is just one point that I wish to make on this case, and that is a plea to every man doing obstetrical work, to examine his cases carefully, shortly before the date of expected labor. There will always be cases which puzzle us and fool us, but more and more will be learned as we follow this plan, much to the benefit of our patients, as well as ourselves; indeed sometimes saving us not a little embarrassment.

The procedure followed in the one above is one not found in any text book as far as I know; it was simply an expedient which I decided to try, feeling that the risk to the mother was no greater than that of any other method, and fortunately I succeeded this time. The next time may be total failure, and a knowledge of the existing condition gained prior to labor will often enable us by external manipulation and posture, to correct the malposition or, failing, will give us plenty of time to decide upon and to prepare for one of the more radical procedures, which we determine as best in the interest of both mother and child.

—————R—————

### **Early Diagnosis and Treatment of Syphilis.**

WILLIAM K. TRIMBLE, M.D., Kansas City, Missouri.

Read before the Golden Belt Medical Society, July 6, 1916.

It seems evident from a number of years observation that the profession as a whole is far too careless in the care of patients with early syphilis. It is true that it requires far more diagnostic skill to be able to recognize some conditions which are far removed from, but are due directly to lues, but from all viewpoints, the most important case of syphilis is the early case.

Certainly, if we ever hope to cure a case of syphilis, it seems evident that the earlier treatment is instituted, the more hope there will be of obtaining such a result.

Since secondary manifestations are but the evidences of widespread metastasis of the organism in remote parts of the body as well as the skin, and mark the crest of an acute septicemia, such a period in this disease cannot by any means be considered, from the standpoint of therapy, an early case. The local response to treatment begun in the so-called secondary stage of this disease is as a rule far more striking and apparently effectual than when the treatment is instituted earlier.

Every possible means to make a diagnosis in early syphilis should be used before the appearance of secondaries, and to ignore the positive diagnostic evidences which every early chancre presents is, in most cases, gross neglect. A clinical differentiation of specific from non-specific lesions is in most cases impossible. This is particularly true in the first few days of a lesion. It may be said that chancres present a classic gross pathology only in their later stage or just before beginning resolution. Since beginning resolution of a sore marks the establishment of antibodies from systemic invasion, it is incumbent upon the physician to recognize the specific nature of such lesions much earlier. There is scarcely any single feature about a primary sore which may be considered diagnostic. The classic induration is not present in all these lesions by any means. A single lesion should always be considered very suspicious. But one not infrequently sees multiple lesions showing absolutely no induration in which spirochetæ are numerous. Possibly the most diagnostic single feature of a primary sore is in the character of the exudate. Specific lesions are as a rule non-purulent and non-hemorrhagic. They are characterized by an exudation of serum. Why the exudate is serous is due to the fact that spirochetæ do not produce a local infiltration of polymorphonuclear leukocytes, but produce an intense local plasma-celled infiltration into



the connective tissue and lymph spaces, and further by the fact that the terminal blood vessels become early occluded. In lesions not secondarily infected by pyogenic organisms, such tissue changes allow the escape of serum only. The earlier the lesion is seen, the more characteristic is this serous exudate of specificity.

There are two essential laboratory methods used in the recognition of primary lesions; first, by the use of the dark-field apparatus and, second, by the Wassermann test. Depending upon the stage of the lesion, each has its relative diagnostic value. The earlier lesions are seen, the more valuable are dark-field examinations. As the stage of beginning resolution of the chancre is approached, positive results from dark-field examinations become less frequent and results from the Wassermann test become more valuable. Experience has shown that in the application of these two tests to the best advantage, the chancre may be divided into three stages. First, from the first appearance of any macroscopic evidence of a lesion up to about ten days; second, from ten days to two weeks; third, from two weeks to the stage of beginning resolution. By far the greater per cent of positive findings can be made by an examination of the exudate during the first ten days. When we consider the general behavior of the spirochetes with reference to the tissues they invade, the advantages of an early examination of all suspicious lesions will be obvious. It has been shown that the organisms may gain entrance by being lodged against roughened areas in the epithelium of the mucosa (actual lesions of the mucosa not being necessary to a successful inoculation) and that they grow by preference among the deeper layers of the epithelial cells where anaerobic conditions are best. In a very short while after successful multiplication of the organisms begin, a pin-point vesicle is formed, covered by the dryer cells above and by an intact layer of basal cells beneath. The serum of this vesicle, no matter how early it may be discovered, is found teem-

ing with spirochetes. Certain factors, the chief possibly being the oxygen tension of the capillaries beneath, at first force the organisms to follow the epithelial layers outwards, and, as a result, the lesion increases in diameter. During the first ten days, the underlying endothelial and round-celled proliferation has not, as a rule, reached that stage where the oxygen influence of the blood has been overcome. As a result, the organisms have not entered the deeper tissues to any great extent. For these reasons, the first few days of the chancre offers the greatest possible chance of finding the organisms. The patient with a lesion usually presents himself within this period. When he does so, one of two things, both equally bad, usually happens. He is told that the lesion is but a chancroid, or the sore is thoroughly cauterized, an antiseptic prescribed and the patient told to wait. Such practice, while exceedingly common, cannot be too thoroughly condemned. In the first place, chancroids are rare pathological entities and it is exceedingly unfortunate that the term chancroid, a lesion resembling a chancre, should have become so universally recognized. Personally, in the last ten years, though my number of cases is not large, I have seen but three genital lesions which could be considered chancroids. At least one could not prove them specific. What such cases may develop later remains to be seen, but it is safe to say that nearly all lesions pronounced chancroids prove in the end to be luetic. On the other hand, the application of caustic to specific lesions is worse than bad. Such a procedure has never changed the course of a specific lesion and certainly local applications will never cure syphilis. Cauterization is bad in that it frequently destroys all possibility of an early diagnosis, also the most valuable period in the treatment of the disease. During the first ten days the Wassermann test is rarely ever positive. However, if glandular enlargement is present in this period, the Wassermann test may be expected to be positive.

In the second stage of the chancre, from ten days to two weeks or more, the per cent of positive findings by dark-field examinations materially decrease. The organisms are not so numerous in the superficial exudate, but have found their way into the deeper tissues. As a rule, the lesion has for some unknown reason, been vigorously treated with escharotics and local antiseptics, adding materially to the impossibility of finding the organisms. After ten days, the Wassermann test is positive in the greater per cent of the cases.

In the third stage of the chancre, aside from those conditions obtained by local treatment, the possibility of finding the organisms by direct examination is greatly decreased. Endothelial proliferation and round-celled infiltration has taken place to such an extent that the local oxygen tension has been reduced to the point where the organisms have invaded the deeper tissues in large numbers, while the surface environment has become increasingly detrimental to surface growth. As a rule, few or no organisms are found by direct examination. They are more apt to be found along the epithelial margins of late sores.

A negative dark-field examination in any stage of a suspicious lesion should never be considered conclusive. In all late sores, adenopathy is nearly always present and this fortunately makes the Wassermann test increasingly valuable.

The old clinical method of awaiting the appearance of secondaries before the diagnosis of lues is made and treatment instituted, in the presence of the recent diagnostic methods, is justifiable in the very small fraction of 1 per cent of the cases only.

In the diagnosis and treatment of primary syphilis, it is important to keep in mind that the most favorable time in which to treat syphilis, from the serologic standpoint, is immediately after the appearance of the primary lesion, that local treatment of a suspicious lesion should be withheld until the diagnosis is positively made, that one should never call a genital lesion a

chancreoid until it is proven positively that it is not specific, that if treatment is instituted after the appearance of secondaries, a permanent cure of the disease is hopeless in the greater majority of cases.

—R—

In view of the interest taken in the concentration of uric acid in the blood in gout as a diagnostic symptom, M. S. Fine, New York (*Journal A.M.A.*, June 24, 1916), calls attention to the fact that, as Garrod pointed out many years ago, uric acid as well as urea may be retained in early nephritis, it is important to eliminate the nephritic element as a factor in the retention of uric acid before the latter can be regarded as an indication of gout. He gives a tabulated statement of the blood analysis in two groups of cases, one giving the typical history of gout, and the other of cases with evidence of incipient nephritis, such as slight albuminuria, casts, or diminished phenolsulphonphthalein output. The striking similarity of the blood pressure in the two groups is at once apparent. This raises the questions 1. Is gout merely a stage in the development of interstitial nephritis, the further progress of which may be indefinitely delayed? 2. Is early interstitial nephritis merely potential gout, the further clinical symptoms of which may or may not appear? 3. Is uric acid retention of gout due to the specific condition, gout, or to a complicating early interstitial nephritis? Cases have been reported of gout with normal blood uric acid concentration. The two practical points brought out here are: "1. Since uric acid is the first of the nitrogenous substances to be retained in interstitial nephritis, its determination may give the first indication of this condition when other signs are uncertain or lacking. 2. Since gout and very early interstitial nephritis are characterized by essentially the same blood picture, it is necessary to employ every possible test to exclude nephritis before a high blood uric acid may be regarded as evidence of gout in the absence of the typical classical clinical manifestations."



# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - Editor

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### Dr. John B. Murphy.

Dr. John B. Murphy, whose death occurred last month, was something more than a great surgeon, more than a genius, he was a great man of great renown. There are many great surgeons and many great men who are little known in the world. Murphy would have been reputed great in any other line of work.

His opportunities were exceptional, his knowledge was exhaustive and his skill was phenomenal, but there was in him that quality of personality which makes great leaders of men. He was a great teacher because he was a leader. He had the ability to make others see the things he saw and see them as he saw them—to lead others in his line of thought.

His was a large experience from which the medical profession has drawn great benefits and from which generations to come will draw knowledge and inspiration and courage.

—R—

### Good Roads.

During the campaign preceding the last primary election the prominence given to the subject of good roads, in the speeches made by the candidates for the legislature, was very noticeable. This simply indicates the growth of public sentiment

in favor of the good roads movement, for politicians seldom if ever lead public sentiment, but adopt the issues which they can no longer ignore.

No class of men is more vitally interested in good roads than are physicians, and the candidates for the next legislature, whose favorable attitude toward this question is definitely known, will no doubt be generally popular with the medical profession.

Although Kansas has not taken such active steps for road improvement as some other states, the roads here are generally better than those in Missouri and Illinois. About five years ago a certain line of road across Missouri was designated as a state highway and the enthusiasm along that highway gave promise of the early completion of a permanent thoroughfare from Kansas City to St. Louis. After nearly five years, however, one is surprised to find how incomplete the work is. Much of this highway, which is generally known as the Old Santa Fe Trail, is in fine condition and there are several miles of hard road near the larger towns, but apparently no effort has been made to build a permanent or serviceable road through the river bottoms. Approaching Boonville from Kansas City one finds about fifteen miles of excellent hard road, but across the river the sand is given an occasional covering of straw and for several miles there is apparently the old trail in its primitive state. Farther along will be found a series of rocky hills in which rock ledges and boulders project in every conceivable place and one looks in vain for evidences of even the old trail. In this section no effort at road building whatever is manifest and, although material is most abundant, it is allowed to remain as—one is told along the route—one of the very worst pieces of road between New York and San Francisco. The state highway from Hannibal to St. Joseph shows a considerable amount of work. There are many fills which are still rough, but there are many short stretches of excellent road. The culverts and bridges are generally old

and out of repair, and, as on the other highway, the sections which are in the greatest need of improvement remain in their primitive state. Illinois has several marked routes from Chicago to St. Louis, which for the most part are excellent roads, but are interrupted by the Macoupin and Mississippi bottoms. No effort has been made to construct a permanent or serviceable road through these bottoms and during the rainy seasons they are practically impassible. This is also true of the cross state highways which are interrupted by the Illinois bottoms. To build permanent roads through these bottoms is not an impossible engineering feat, but is too large an undertaking for the adjoining counties alone. There should be some way by which money could be appropriated for the construction of roads through such sections as those described. We know that in Kansas the constitution does not permit the appropriation of money for internal improvements, but in this state there are no such places to be found as those mentioned.

While conditions in Kansas are more favorable to the construction of permanent highways than in many other states, there is great room for improvement. The aid which the Government will furnish can be used to excellent advantage, but many counties will be unable to meet the conditions to any very serviceable extent.

One of the questions with which the physicians of the state should be concerned is relative to the appointment of a state highways commission, and some state supervision of road construction in general. Modern road builders seem to be losing sight of the primary purpose for which a road is made. After much discussion of theories, and the application of theories, of road building, the crowned road has been pretty generally accepted as the ideal where dirt is to be used, but the builders, with exaggerated ideas of the merits of the crown, are building peaks instead of crowns, and automobiles and other vehicles keep as far away from them as the line fences and ditches will

permit. It makes little difference how effectively a road will turn water if it is unfit to drive on in either wet or dry weather. In a recent twelve hundred mile automobile trip the writer had occasion to compare the various kinds of road after some excessive rains, and was much surprised to observe the great superiority of the slightly crowned—almost flat—roads over the excessively crowned ones. Traveling over more than two hundred miles of road after several days of rain—totaling nine inches—the slightly crowned roads, apparently not more than twelve inches higher in the middle than on the sides, were found to be smooth, hard and unrutted, while the high crowned roads were rough and choppy, from the cross channels cut by the water running off, and in some places the side slipping of the wheels had pushed the mud down so that ridges and ruts were formed. Some of this road had been dragged after the rains and some of it had not, but dragging did not eliminate the cross channels. This does not prove that the crowned road would not be superior to the other after a prolonged rainy season or after heavy snows, but from the information we were able to obtain, the comparatively flat roads remained in excellent condition if they were dragged after every rain and every snow. The point we wish to make is that the highly crowned road is dangerous to drive on in slippery weather and unpleasant to drive on in dry weather. No class of men in Kansas has a better opportunity to study road conditions than physicians and, since they are compelled to use them in all seasons, they should have some influence in determining the kind of roads to be built.

#### R— **The Orphan's Home.**

Every now and then wide publicity is given to some story of the State's inhumanity to its unfortunate charges. Some months ago stories of the unsanitary conditions at one of the State Hospitals were copied by papers in all parts of the country and people in other states are still



regaling their friends with tales of cruelty and neglect in the state institutions of Kansas.

If these stories have a political significance only and have no foundation in fact, then those who are responsible for them, who would so libel the fair name of Kansas, should be publicly and permanently discredited.

One of the most recent, or rather most persistent, of the stories concerns the mismanagement of the Orphan's Home and the mistreatment of its inmates. If there is only a little truth in these charges it is time for the people of Kansas to know the facts. No excuses or mitigating circumstances for neglect of the inmates of the Orphan's Home can be sufficient. Those children should have the very best of everything. Why not? They are not criminals. They are in no manner responsible for their misfortune. The State has assumed the responsibility of wardship over these children. They are to be future citizens of the State. The kind of citizens they will be depends upon the care and training they are given. The State then has assumed the responsibility, not only for the housing and feeding and clothing of these children, but for their future status as citizens.

The children adopted by the State should have as good housing, as good food and clothing, the same refining influences, as are afforded the children of the best families, and they should have in full every benefit to be derived from the State's educational facilities.

It should no longer be a disgrace to have been a ward of the State, but every child in its custody should be so trained and educated that when he is released from its wardship he will be a credit to the State and an honor to the citizenship he assumes.

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### **Doctors in Colorado are Entertained.**

Editor Journal:

One of the most pleasant medical society functions it has been our good fortune to attend was "pulled off," August

10, by the El Paso County Society, which is composed mostly of Colorado Springs men. On that date the local members and visiting physicians, as their guests, left the Eagle Club rooms in Colorado Springs at 2 p.m. in automobiles provided for the occasion, took a flying trip through the Garden of the Gods and stopped for dainty refreshments at the magnificent home of the late General Palmer (Glen Eerie) where, contrary to the usual custom, we were shown through the private rooms of this modern castle. This courtesy we owe to Dr. Watts, son-in-law of General Palmer, who is now engaged in active practice in Colorado Springs. From Glen Eerie past the Modern Woodmen Sanitarium and over the fine road to Palmer Lake was a most exhilarating trip, and with that demon driver, Dr. Mayhew, at the helm of our car, we did it in record time. A cloud of dust on the horizon ahead was sufficient provocation to produce a burst of speed entirely out of proportion to the necessity and comfort of the occasion. And incidentally it might be said we caught it, whatever it was, went round or jumped it. To one used to the level plains of Kansas it was quite a novel and terrifying sensation to coast down a precipice at the rate of forty miles an hour, hurdle a chasm a half mile deep, attempt to smoke a cigarette, look happy, and retain control of all the normal functions at one and the same time. In the language of the poet, "it can't be did."

At Palmer Lake pavilion a trout dinner had been prepared and, served as it was under delightful weather conditions and in the shade of the mighty Rockies, was most enjoyable. After the dinner we listened to a very interesting talk by Dr. Bertram Sippey of Chicago, the guest of the evening. His subject, Gastric Ulcer and Its Treatment, was handled in a masterly manner and, while some might and did question his deductions, none could deny the logic and painstaking efforts that had led up to these deductions. The writer took the liberty of asking Dr. Sippey to take part in the next meeting of

the Kansas Medical Society and received anything but an unfavorable answer, although he could not commit himself at the time. Let our program committee keep this in mind, as they will do a clever stroke if they can secure him for our next meeting.

The return trip was made back to Colorado Springs about 11:30 p.m. without accident, although the prevailing odds were seven to one the other way. The writer tried unsuccessfully to trade his B.V.D.'s for a fur overcoat, but was thawed out the following afternoon.

A great share of the success of this meeting was due to the efforts of Dr. Boyd, the efficient president of the El Paso County Medical Society and a former practitioner of Baldwin, Kansas. He was up and doing all the time and certainly put forth every effort to make the out of town guests feel at home.

We wish at this time to second the motion of Dr. Boyd that this be made an annual affair and that a trout dinner be arranged every year for the doctors of Kansas who may be sojourning in Colorado. It is only as a slight token of appreciation from the medical men of Kansas who were present that this method is taken to thank the El Paso County Medical Society for their hospitality.

J. A. DILLON, M.D.

## MISCELLANEOUS.

### New and Nonofficial Remedies.

**Fibrin Ferments and Thromboplastic Substances (Kephalin).**—The clotting of blood has been shown to be due to the action of the fibrin ferment on the fibrinogen of the blood. The fibrin ferment (thrombin) exists in the blood in the form of prothrombin which is converted into thrombin by the action of calcium and thromboplastic substance (thromboplastin). Kephalin, prepared from the brain, has the properties of thromboplastin. Preparations containing thromboplastin are said to be useful, when applied locally, in the treatment of hemorrhages,

especially hemorrhages from oozing surfaces, scar tissue and nosebleeds. The intravenous use of thromboplastin in certain conditions has also been proposed.

**Brain Lipoid.**—**Impure Kephalin.**—This is an ether extract of the brain of the ox, or other mammal, prepared according to the method of Howell and Hirschfelder. It has the properties of thromboplastic substance described above. It may be applied direct to the tissues or on sponges or pledgets, or it may be used in the form of an emulsion with sodium chlorid solution.

**Solution Brain Extract.**—**Solution Thromboplastin—Hess.**—An extract of ox brain in physiologic salt solution prepared by the method of Hess. It has the properties of thromboplastic substances described above. The solution may be applied directly to, or sprayed on the tissues or by means of a sponge or tampon.

**Galactenzyme Tablets.**—Tablets containing a practically pure culture of bacillus bulgaricus. For administration in intestinal fermentative diseases. Put up in bottles containing 100 tablets each and bearing an expiration date. The Abbott Laboratories, Chicago.

**Galactenzyme Bouillon.**—A pure culture in vials of bacillus bulgaricus, each vial containing about 6 Cc. Used internally for intestinal fermentative disorders and topically in nasal, aural, throat, urethral and other affections when the use of such a culture is indicated. Put up in packages of twelve vials each. The Abbott Laboratories, Chicago.

**Ampules Mercuric Salicylate—Squibb, 0.065.**—Each ampule contains 0.065 Gm. mercuric salicylate, N.N.R., in 1 Cc. of sterile suspension. E. R. Squibb & Sons, New York.

**Ampoules Quinine Dihydrochloride—Squibb, 1 Gm.**—Each ampule contains 1 Gm. quinine dihydrochloride, N.N.R., in 2 Cc. of sterile solution; 0.5 Gm.—Each ampule contains 0.5 Gm. quinine dihydrochloride, N.N.R., in 2 Cc. of sterile solution; 0.25 Gm.—Each ampule contains 0.25 Gm. quinine dihydrochloride, N.N.R., in 2



Cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 1 Gm.—Each ampule contains 1 Gm. quinine and urea hydrochloride, N.N.R., in 2 Cc. of sterile solution; 0.5 Gm.—Each ampule contains 0.5 Gm. quinine and urea hydrochloride, N.N.R., in 2 Cc. of sterile solution; 0.25 Gm.—Each ampule contains 0.25 Gm. quinine and urea hydrochloride, N.N.R., in 2 Cc. of sterile solution; 1 per cent—Each ampule contains 5 Cc. of a sterile 1 per cent solution of quinine and urea hydrochloride, N.N.R. E. R. Squibb & Sons, New York.

Ampoules Sodium Cacodylate—Squibb, 0.13 Gm.—Each ampule contains 0.13 Gm. sodium cacodylate, N.N.R.; 0.05 Gm.—Each ampule contains 0.05 Gm. sodium cacodylate, N.N.R. E. R. Squibb & Sons, New York (Jour. A.M.A., August 5, 1916, p. 437).

Arbutin-Abbott. — A non-proprietary brand complying with the standards for Arbutin N.N.R. The Abbott Laboratories, Chicago. (Jour. A.M.A., August 19, 1916, p. 586.)

Ampules Mercury Iodide (Red), 1 per cent in Oil—Squibb.—Each ampule contains 1 Cc. of a solution of red mercuric iodide and anesthesin, each 0.01 Gm., in a neutral fatty oil. E. R. Squibb & Sons, New York. (Jour. A.M.A., August 19, 1916, p. 586.)

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### Research Work in Diabetes.

Distinct additions to the knowledge of diabetes have been made through the work of Dr. H. Rawle Geyelin under the special George Blumenthal scholarship of \$900 in the School of Medicine of Columbia University. During his incumbency of this scholarship in the last three years he has been doing research work along clinical lines particularly in diabetes, and has published four valuable articles on metabolic diseases, one in conjunction with Dr. DuBois. Five beds have been set aside for this special study. Special attendants and a special trained nurse take care of these patients, and a branch of the kitchen de-

partment has been set aside for the preparation of their food. The work in diabetes has developed under the Blumenthal fund into a special clinic and the patients at the Vanderbilt Clinic are also used in this connection, so that the disease has had the most thorough and systematic study. In order to give Dr. Geyelin academic standing he has received an academic appointment as assistant, and, at his earnest request, has been allowed to give instruction in the special work he is carrying on, as it is believed at the college that research in clinical medicine is stimulated and kept at a high grade of efficiency only by associating with it a certain amount of teaching, which places the instructor under the stress of meeting the eager inquisitiveness of the advanced and earnest undergraduates.

In addition to this scholarship, there have been in the last two years, paid from the same fund, three undergraduate scholarships of \$250 each, and there will be four in the coming scholastic year. The students who receive them are all high-stand men, and work as special assistants in the laboratories. These scholarships are much sought after and aid materially in the research work of the department. Students holding them in the third and fourth years are also used as assistants in laboratory teaching, and this association with the students of the lower classes is much appreciated by the incumbents. The holders of the scholarships in 1916-17 are Lorrin Andrews Shepard, Physiology; Thomas Trovillo Sheppard, Physiology; Adolf Frederick Herrman, Anatomy, and Lee Hollister Ferguson, Neurology.

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### Opportunities Offered to Qualified Physicians.

The New York State Civil Service Commission calls attention to the opportunities offered to qualified physicians for appointment to positions in the medical service in state hospitals, prisons, and charitable institutions.

Although the salaries offered seem to afford adequate compensation, the number

passing the examinations has not been sufficient to meet the needs of the service. An examination was recently held for prison physician, salary \$2,000, but the number of competitors was very small and no one passed the examination. An examination for assistant physician in the prisons, salary \$1,500, held at the same time, produced only two eligibles. An examination for assistant physician in the state hospitals held January 22, 1916, produced eighteen eligibles, but the list was practically exhausted before July 1. Another examination was held July 15 but only eleven competitors were secured.

This position carries an initial salary of \$1,200 with maintenance including quarters, board, laundry, etc., and the salary is automatically increased \$100 a year until \$1,600 is reached, when opportunity is offered for promotion to the next higher grade, senior assistant physician, at \$1,800 and maintenance.

The state hospital service really offers a career, as there is a regular line of promotion for the medical staff from assistant physician to the position of superintendent.

Anyone interested in these examinations should write to the "State Civil Service Commission, Albany, N. Y.," for information.

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#### UNITED STATES PUBLIC HEALTH SERVICE.

Congress has recently made an appropriation for thirty-three additional assistant surgeons in the United States Public Health Service. These officers are commissioned by the President, and confirmed by the Senate. The tenure of office is permanent, and successful candidates will immediately receive their commissions.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed assistant surgeons after twelve years' service are entitled to examination for promotion to the grade of surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant sur-

geon-generals \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

Examinations will be held every month or so in various cities, for the convenience of candidates taking the examination. Further information will be furnished by addressing the Surgeon-General, United States Public Health Service, Washington, D. C.

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#### Government Health Work in Alaska.

WASHINGTON, D. C., Aug. 23.—With the aid of special appropriations granted by Congress during the past two years, Secretary Lane of the Department of the Interior, through the Bureau of Education, has been able to make considerable progress in checking the ravages of disease among the natives of Alaska. The Government has recently opened a well-equipped hospital in Juneau for native patients and small hospitals are maintained at three other centers of native population. A number of physicians and nurses have been employed for service in hospitals and in maintaining sanitary conditions in native villages; and the teachers of the United States public schools in Alaska are supplied with medicines and medical books in order to enable them, in the absence of a physician, to treat minor ailments.

An investigation made several years ago showed that, without this work in disease prevention on the part of the Government, the native race in Alaska would soon die of tuberculosis and other diseases. The Department of the Interior and Congress have realized the urgent need for medical relief and it is believed that the steps now taken will help to keep our record clear in maintaining the native population of Alaska, and in relieving them from the suffering caused by disease and the lack of proper medical attention.



### Propaganda for Reform.

**Chemotherapeutic Treatment of Tuberculosis.**—In the August issue of the *Journal of Experimental Medicine*, Koga, Otani and Takano report on a new treatment of tuberculosis and leprosy. Koga reports that the treatment of animals inoculated with a preparation of copper and potassium cyanide produces healing changes in tuberculous lesions. He also reports on the treatment of sixty-three cases and thinks that his preparation, which he calls "cyanocuprol," greatly improves or cures pulmonary tuberculosis in the first or second stages and even is beneficial in the third stage. Otani also gives a favorable clinical report of tuberculous cases. Takano treated cases of leprosy with "cyanocuprol" with what appear to be beneficial effects. The Japanese investigators give no clear statement in regard to the composition of the copper-cyanide preparation which they used. (*Jour. A. M. A.*, August 5, 1916, p. 443.)

**Tartar Emetic and Sodium Bicarbonate Incompatible.**—The *A. M. A. Chemical Laboratory* reports that when an aqueous solution of tartar emetic is added to a solution of sodium bicarbonate a clear solution results at first, but that on standing a precipitate of antimony hydroxide is formed. (*Jour. A. M. A.*, August 5, 1916, p. 462.)

**Ambrine.**—An article, "War Letters of an American Woman," in the August 2 issue of "Outlook" contains a glowing account of the use of "Ambrine" in the treatment of burns by a Dr. Barthe de Sandfort, Hospital St. Nicholas, Paris. Ambrine is a proprietary preparation which has been on the French market for years. It is a secret nostrum in that the proportions of the ingredients—"wax, paraffin and resin"—are not given. There is nothing original in an application of melted resin, beeswax and paraffin, although the correspondent of the Outlook seems to have been carried away with the idea that it is one of the great miracles of the day. (*Jour. A. M. A.*, August 12, 1916, p. 535.)

**Sodium Sulphate as an Antidote to Phenol Poisoning.**—Sodium sulphate in strong solution is one of the best known antidotes for phenol poisoning. At one time it was erroneously thought that the antidotal effect was due to the formation of sodium phenolsulphonate. It has been suggested that whatever action sodium sulphate has as an antidote for phenol may be due to some hindrance to absorption, and possibly also to added purgation. (*Jour. A. M. A.*, August 12, 1916, p. 535.)

**Aspirin.**—The patent on aspirin will expire next year. The Bayer Company, the American agents, view with disfavor the prospect of losing the right to the sole manufacture of acetyl-salicylic acid. This may explain the campaign of publicity which the Bayer Company has inaugurated in the lay press in which the public is urged to buy the Bayer brand of acetyl-salicylic acid (aspirin) only. There can be no better time than the present for the medical profession to substitute for the non-descriptive name "aspirin" the descriptive and correct name, acetyl-salicylic acid. (*Jour. A. M. A.*, August 12, 1916, p. 515.)

**A Study of "Uterine" Drugs.**—Dr. J. D. Pilcher, W. R. Delzell and G. E. Burman, working in the pharmacologic laboratory of the University of Nebraska Medical School, have studied the action on the excised guinea pig uterus of a number of drugs which are constituents of proprietary and "patent" "female" remedies, drugs for the value of which there is little evidence and which would have fallen into disuse but for their exploitation. The following drugs lessened the amplitude of the contractions of the uterine strips, or in stronger solution caused a complete cessation: Unicorn root, pulsatilla, Jamaica dogwood and figwort. Somewhat less active were valerian and lady's-slipper. The drugs having very weak actions were wild yam, life root and skull-cap. Blue cohosh was most active and put uterine strips in a state of tonic contraction or tetanus. The following drugs were quite inactive: Black haw, cramp bark, squaw

vine, chestnut bark, false unicorn, passion flower, blessed thistle, St. Mary's thistle and motherwort. The authors are confident that the actions observed would also be produced in the intact human uterus provided the drug reached the uterus in a similar concentration but that it is improbable that the concentration of drug used could ever be attained in the body. Work which is under way indicates that these drugs do not act specifically on the uterus but on smooth muscle in general and that this general action would overbalance any favorable action on the uterus. The authors conclude that the drugs examined are practically worthless and that their use is harmful as well as futile since such use tends to perpetuate therapeutic fallacies. (Jour. A.M.A., August 12, 1916, p. 490.)

Radio-Rem.—The Council on Pharmacy and Chemistry reports that those who are well informed on the subject of radium therapy are of the opinion that the administration of small amounts of radium emanation, such as those generated by certain outfits, is without therapeutic value. Having voted not to admit to New and Nonofficial Remedies any radium emanation generator which produces less than two microcuries of emanation during twenty-four hours, the council voted not to accept Radio-Rem outfit No. 2, Radio-Rem outfit No. 2, and Radio-Rem outfit C, each of which is admitted to produce less than two microcuries of emanation per day. (Jour. A.M.A., August 19, 1916, p. 631.)

Olio-Phlogosis.—The council of Pharmacy and Chemistry reports that Olio-Phlogosis (the Mystic Chemical Co., Kansas City, Mo.) is not eligible for admission to New and Nonofficial Remedies. Olio-Phlogosis is to be applied externally by means of a cotton pad for pneumonia, bronchitis, pleurisy, etc. According to information sent to the Council it consists of glycerine to which has been added small amounts of essential oils, iodine, resorcinol, boric acid, quinine bisulphate and sodium thio-sulphate. The Council con-

cluded that the claims for Olio-Phlogosis are unwarranted, that its composition is complex and irrational and that the non-descriptive and therapeutically suggestive name is likely to lead to uncritical use. (Jour. A.M.A., August 19, 1916, p. 631.)

Novocain.—Novocain was introduced about twelve years ago with the claim that it was from one-sixth to one-tenth as toxic as cocain. Hatcher and Eggleston have recently shown that the toxicity of cocain varies widely with different individuals and with the rate of its absorption into the circulation, and that novocain shows far greater variations. The authors are of the opinion that novocain has a distinct field of usefulness, but call attention to the fact that death has followed the clinical use of small doses and that toxic symptoms have been reported by numerous observers. (Jour. A.M.A., August 26, 1916, p. 685.)

Quality of Chlorinated Lime.—J. P. Street, chemist in the Connecticut Agricultural Experiment Station, reports that of 25 samples of chlorinated lime (bleaching powder) which, according to the United States Pharmacopeia, should contain "not less than 30 per cent of available chlorin," only three were found of full strength. Eight contained but traces of available chlorin. This is a dangerous situation when it is recalled that the public as well as the medical profession puts great dependence on the disinfecting powers of this inexpensive material. (Jour. A.M.A., August 26, 1916, p. 695.)

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## BOOKS.

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### The Clinics of John B. Murphy, M.D.

Volume V, Number 4 (August, 1916). The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Octavo of 222 pages, 59 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year, paper, \$8; cloth, \$12.

The August number of the Murphy Clinics has just been received. This number presents a greater variety of clinics than usual, many of them of the infrequent type. Among the subjects discussed are: Melanotic Neoplasm in Digastric Muscle;



Mixed Tumor of Parotid Salivary Gland; Ankylosis of the Mandible; Trifacial Neuralgia; Luxation of Cervical Spine; Tuberculosis of Spine; Fracture of Humerus; Ancient Fracture of Elbow Joint with Ankylosis; Tuberculosis of Elbow; Cica-tricial Fixation of Ulnar Nerve; Occult Carcinoma of Breast; Ureteral Calculus; Ancient Fracture of Rim of Acetabulum; Extensive Trochanteric Bursitis.

#### Obstetrics, Normal and Operative.

By George Peaslee Shears, M.D., professor of obstetrics and attending obstetrician at the New York Polyclinic Medical School and Hospital, formerly instructor in obstetrics, Cornell University Medical College; attending obstetrician at the New York City Hospital; senior attending obstetrician at the Misericordia Hospital. Octavo. 640 pages. 412 illustrations. Cloth, \$6. Philadelphia: J. B. Lippincott Company.

The author of this text book on Obstetrics explains that while there are many books on the subject, he thinks there is room for at least one more based upon a different plan. It is his purpose to eliminate irrelevant matter and thereby give room for more extended discussion of the practical side of obstetrics. One is inclined to admit that the author has carried out his purpose and has produced a very excellent and a very practical treatise on the subject. The illustrations are numerous and are well adapted to the text.

#### Practical Medicine Series.

Practical Medicine Series, comprising ten volumes of the Year's Progress in Medicine and Surgery, under the general editorial charge of Charles L. Mix, A.M., M.D., professor of physical diagnosis in the Northwestern University Medical School.

Volume III, The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C.M., M.D., D.C.L.; Albert H. Andrews, M.D.; George E. Shambaugh, M.D.

Published by The Year Book Publishers, 327 South La Salle Street, Chicago. Price of this volume, \$1.50. Price of series, \$10.

This is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume is complete on the subject of which it treats for the year prior to its publication.

#### Cerebellar Abscess.

Cerebellar Abscess, Its Etiology, Pathology, Diagnosis and Treatment, including the Anatomy and Physiology of the Cerebellum, by Isadore Friesner, M. D., adjunct professor of otology and assistant aural surgeon, Manhattan Eye, Ear and Throat Hospital and Post Graduate Medical School, New York, and

Alfred Braun, M.D., F.A.C.S., assistant aural surgeon, Manhattan Eye, Ear and Throat Hospital, adjunct professor of laryngology, New York Polyclinic, adjunct otologist, Mt. Sinai Hospital. Published by Paul B. Huber, New York. Price, \$2.50.

The authors state that 98 per cent of cerebellar abscesses are otitic in origin and that the diagnosis and treatment of this complication are almost solely the province of the otological surgeon. The anatomy and physiology of the cerebellum are carefully outlined. The etiology, pathology and symptomatology as given in the book have been based upon the reports of eighty-six cases which they have collected. The book consists of five chapters covering the following general subjects: Anatomy of the Cerebellum; Physiology of the Cerebellum; Etiology and Pathology of Cerebellar Abscess; Symptoms of Cerebellar Abscess; Prognosis and Treatment of Cerebellar Abscess.

#### Ultra-Violet Light.

Ultra-Violet Light by Means of the Alpine Sun Lamp, Treatment and Indications, by Hugo Bach, M.D., Bad Elster, Saxony, Germany. Authorized translation from the German. Published by Paul B. Huber, New York. Price, \$1.

This little book, as its title indicates, is written to explain the mechanism and the uses of the ultra violet light as obtained by the use of the Alpine Sun Lamp. A complete description of the apparatus and its methods of application is followed by case reports and results of treatment of various conditions.

#### American Proctological Society.

The following extracts from papers read before the last annual meeting of the American Proctological Society, at Detroit, have been furnished us by the secretary, Dr. Collier F. Martin.

#### INTESTINAL SYMPTOMS DUE TO ACHYLIA GASTRICA.

Alois B. Graham, A.M., M.D., F.A.C.S.

In 5,758 patients presenting gastro-intestinal symptoms, and in every one of whom repeated gastric analyses were made, a diagnosis of achylia gastrica was made in 378. This is about 6.5 per cent, or a ratio of 1 to 5. One hundred were males and 278 females. The youngest was 17 years,

the oldest 73 years. Sixty per cent were between the ages of 40 and 60 years. In 90 per cent the subjective symptoms were chiefly intestinal in character. The bowels were reported regular in 38; constipated in 112; loose (diarrhea) in 142; irregular in 86. Diarrhea was the most frequent symptom and was present in 37.5 per cent of the cases. Description of three groups of cases. Description of the stools which were at times quite characteristic. Rectal symptoms rarely reported. Internal hemorrhoids found in every case. Rectal examination of no value, except that of exclusion, in determining the cause of the intestinal symptoms. In cases where constipation was chief symptom, there was not anything of special interest.

There was no return of the gastric secretion in any of the cases. The course of achylia gastrica is a protracted one. Under proper therapy and prognosis, as to fairly good health, is excellent.

Diet alone in the severe cases of diarrhea was not successful. Astringents and intestinal irrigations were unsuccessful. Hydrochloric acid and pepsin in sufficient dosage is rational therapy and the only one which gave anything like satisfactory results. In some cases diet and hydrochloric acid failed. In these cases a nervous element was present as the administration of bromides in suitable dosage produced most excellent results.

Patients are comfortable as long as they continue treatment. If discontinued even for a brief period, there is a recurrence of the diarrhea. These patients should be correctly informed as to the prognosis; namely, that as long as there is evidence of an absence of the gastric secretion, just so long must they adhere to a rigid diet and take hydrochloric acid and pepsin.

#### OBSERVATION ON FISSURE IN ANO.

*Rollin H. Barnes, M.D., St. Louis, Mo.*

The author considers fissure as an ulcer and believes that traumatic causes are not true etiological factors in the production of this trouble but that it is necessary that

the tissues become inflamed and hence friable and easily torn in order that fissure be formed. He believes that catarrhal inflammatory conditions are frequently the result of an excessive carbohydrate diet and sometimes an excessive fat diet.

In the treatment of fissure he recommends palative treatment by correcting the diet with reference to the excesses of carbohydrates and fats and placing the patient on a proteid diet for a time. When operation is necessary he believes that the object should be drainage rather than paralyzing the muscular fibers. He also advocates the use of a small enema before defecation in order to avoid irritation from the stool. It is very important to keep the wound clean by hot sitz baths and the hot enema, in order that any foreign substance may not remain in the wound.

#### THE ETIOLOGY OF VACCINE TREATMENT OF PRURITUS ANI.

*Louis J. Hirschman, Detroit, Mich.*

Hirschman presented a preliminary report of his work on the bacteriology of pruritus ani as based on the original work of Murray at Syracuse. The work of H. C. Ward, bacteriologist, in conjunction with Hirschman's work, shows that the streptococcus faecalis was present in the twenty-five cases, but the vaccine treatment in these cases, especially that of the autogenous vaccines, has resulted in important or systemic cure in but four cases, while the treatment of the surgical lesions present, or by dietary or hygienic measures, has resulted in relief or cure of all the remaining cases.

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#### Kellogg-Bergonie Method in Obesity.

Obesity is a disease for which there are many remedies but most of these interfere with the patient's love of ease and of the good things of life. Two treatments have recently been combined at the Battle Creek Sanitarium which are not open to this objection and which furthermore do not exact active exercise from those unfitted for it. The Kellogg-Bergonie method of producing muscle movements by means



of the sinnsoidal electrical current have been in successful use there for some time in the reduction of excessive bodily weight. Lately this apparatus has been installed in the hay fever room of the institution so that the additional stimulus to metabolism of a low temperature has been gained. This apartment, in which many persons have found relief from hay fever, is kept at a temperature not far from zero.

—R—

### **Mercurialized Serum in Syphilis.**

Mercurialized serum represents an important advance in the administration of mercury for the treatment of cerebral and systemic syphilis. In cerebral syphilis the spirochetes are located in the cerebrospinal system and are unaffected by the intravenous or other use of the usual anti-syphilitics. Dr. C. M. Byrnes, of Johns Hopkins University, has discovered that bichloride of mercury loses its corrosive properties and may be administered intraspinally if dissolved in the proper amount of horse serum, thus bringing this powerful antisyphilitic remedy in direct contact with the spirochetes in the intraspinal and intracerebral regions. Intravenous injections of mercurialized serum are also employed for the treatment of systemic syphilis.

#### **INTRASPINAL TREATMENT**

For intraspinal injection, the H. K. Mulford Company furnishes mercurialized serum in tubes of 30 c.c., containing 0.0013 Gm. (1-50 gr.) Mercuric chloride, known as Mercurialized Serum No. 1; in tubes of 30 c.c., containing 0.0026 Gm. (1-25 gr.) mercuric chloride, known as Mercurialized Serum No. 2; in ten 33 c.c. ampuls, each containing 0.0013 Gm. (1-50 gr.) mercuric chloride, known as Mercurialized Serum No. 3 (hospital size), and in ten 30 c.c. ampuls, each containing 0.0026 Gr. (1-25 gr.) mercuric chloride, known as Mercurialized Serum No. 4 (hospital size).

#### **INTRAVENOUS TREATMENT.**

Lloyd Thompson, Ph.B., M.D., of Hot Springs, Ark., in a preliminary report, published in the Journal of the American Medical Association (May 1, 1915, page

471), reports administering mercurialized serum intravenously, without the occurrence of phlebitis and periphlebitis. While not recommending mercurialized serum in all cases of syphilis, he finds it of great advantage where quick results are imperative and to overcome the great pain and irritation following intramuscular injections of mercury.

The preliminary report comprises eight cases, in which sixty-six injections were made altogether, and in no case was there the slightest amount of phlebitis. Dr. Thompson states that it is not necessary to use autogenous serum. He prepared a solution of mercuric chloride of such strength that each cubic centimeter contained 22 milligrams (1-3 grain) of the salt. This solution was divided for dosage as convenient. The initial dose in all cases was 1-75 c.c. or 5.5 mg. (1-12 gr.) of mercuric chloride. This was gradually increased to 7 c.c. or 22 milligrams (1-3 grain). Quite severe ptialism occurred in one case after a total amount of 131 milligrams (15-6 grains) had been administered; and three of the other cases showed slight symptoms of ptialism after a total amount of 22-3 grains had been administered. The injections were then discontinued. While bichloride of mercury, combined with normal serum, is non-corrosive, it should be remembered that it is just as poisonous as an aqueous solution of mercuric chloride, and therefore, its dosage should be reckoned the same as that of mercuric chloride.

To supply the demand for mercurialized serum to be used intravenously, the H. K. Mulford Company is furnishing mercurialized serum in sealed ampuls, using for that purpose normal serum from the horse. These syringes<sup>2</sup> are of two strengths, namely 1-12 and 1-6 grain.

—R—

### **Kansas City Buys Equipment for Tuberculosis Hospital.**

At the last meeting of the health board the president instructed the purchasing agent to issue requisition for complete surgical equipment to be installed in the

Municipal Tuberculosis Sanitarium at Leeds. The Physicians' Supply Company, 1021 Grand Avenue, was given the contract.

In the equipment absolute sanitation and sterilizing apparatus includes the last word, fumigators and disinfectors as well. The nose and throat treatment and examining rooms are furnished in keeping with the balance of the fixtures and the physician in charge says that when it is all set up there will be nothing better anywhere. —Kansas City Post.

—R—

Applications for positions on the House Staff of the Children's Hospital, Boston, Mass., should be addressed to the Surgeon, Dr. R. W. Lovett, 234 Marlborough Street, Boston. The terms of service begin on the first Monday of March, June, September, and December, and the service consists of the care of Orthopedic affections in children, under a resident surgeon. The Children's Hospital is a teaching hospital of the Harvard Medical School, and is situated directly next to it, forming one of the group of affiliated hospitals. Daily teaching is done in the wards and amphitheater by the hospital staff, and systematic instruction is given to house officers.

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**FOR SALE**—My practice, office equipment, Ford car, residence which is just completed, located in a town of 500 inhabitants surrounded by as good farming country as in the state. My reasons for selling—I am taking up a specialty which necessitates my moving. Address "F," Kansas Medical Journal.

**DOCTOR**—Why not combine business with pleasure this summer and take a laboratory course in Los Angeles? For particulars, address C. A. Johnson, M. D., 1002 Burlington St., Los Angeles, Calif.

**FOR SALE**—Static X-Ray machine made by National X-Ray Co., Topeka, Kansas. This machine is new, never having been used. A bargain. Ed. C. Jerman, R. F. No. 1, Topeka, Kan.

**FOR SALE**—A Victor Finsen Light Apparatus. Will sell cheap. Address Journal Kansas Medical Society, Topeka, Kansas.



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### The Newer Anaesthetics in Labor.

GEORGE CLARK MOSHER, Kansas City, Mo.

Read before the Kansas Medical Society, at Topeka, Kan.,  
May 3-5, 1916.

Anæsthetics in labor differ somewhat from those in general surgery because pain in labor is relative. One woman's suffering is borne in silence, another appreciates agony and her appeals are correspondingly more insistent for relief.

Since Crile has promulgated his doctrines of anociassociation the effects of shock are more clearly understood because more intelligently analyzed. Pain should not be endured when it can be avoided, therefore the resort to expedients which not only relieve from distress of pain but by avoidance of shock leave the patient in better condition for recuperation and thus shorten her convalescence.

A number of expedients have recently been suggested. It is only necessary to mention some of them, for instance, spinal anæsthesia in which it is asserted by Bevan nine deaths occurred in the first 1,000 cases in which it was used. One death occurs in each 500 cases.

Intravenous anæsthesia with ether has been used after careful animal experimentation, but was found to produce lung embolism in 10 per cent of cases. It is dangerous and complicated.

Blocking of nerves to anæsthetize the field of operation by infiltrating the local supply is not a comfortable method. It is complicated and its use recommended for cases like hernia, not applicable in labor. Local infiltration with novocain and epinephrin is a safe method in competent hands

but its advantage is limited. It is not suitable for obstetric work.

The newer anæsthetics to be considered therefore reduce themselves practically to nitrous oxide-oxygen and scopalamin narcophin, the former by inhalation, the latter by hypodermic injection.

In order to have first hand authority as to the gas, a series of letters were written during October to a number of surgeons and obstetricians throughout the country as to their experience. It is astounding to find reports like that of Dr. James F. Baldwin, Gynecologist of Grant Hospital, Columbus, Ohio, Professor of Gynecology, Ohio State University.

Dr. Baldwin says: "There has been from the very start a 'conspiracy of silence' among some of the nitrous oxide-oxygen anæsthetists to cover up their deaths. One would have supposed that had they been actuated by purely scientific or philanthropic motives they would have promptly published disasters, as in this way alone could the relative advantages or disadvantages of the new anæsthetic be determined. Instead of that open and manly course, however, just the opposite course has been pursued.

With the utmost difficulty I got track of twelve deaths from the combination which I reported at the meeting of the Tenth District Medical Society in Chillicothe, Ohio, a few weeks ago. Nitrous oxide anæsthetists were there from Columbus, Cleveland, and Cincinnati, but they cut a very sorry figure, as I had all the facts. Since the meeting adjourned, I have notes of three other deaths which they had

up to that time covered up. This means that in Columbus alone we have a death rate of about 1 per cent from nitrous oxide-oxygen, in major surgery.

At that meeting a Cincinnati anæsthetist admitted that they had had four deaths in Cincinnati. Teter of Cleveland, a number of years ago, admitted that he knew of something over twenty deaths but he never reported any of them. An eastern anæsthetist had made admission of about the same number but again without giving details.

Ochsner used nitrous oxide-oxygen in one hundred consecutive cases but abandoned it for ether, and in the last edition of his book issued a few months ago, he reports he thinks its only value is for advertising purposes. The Mayos used it in fourteen hundred cases but gave it up. Murphy and Bevan in Chicago have both practically given it up except in selected cases.

While nitrous oxide-oxygen may kill by asphyxia, most of the deaths occurred suddenly and by stoppage of the heart as we see in chloroform deaths."

Dr. John B. Murphy writes, under date of November 15, 1915: "We have been using nitrous oxide gas in acute intestinal obstruction, occasionally for appendicitis. We have had no untoward symptoms from it. I have learned positively of two deaths in Chicago and two out of Chicago, in addition to those already reported."

Dr. Ellis Fischel, of St. Louis, writes November 23, 1915: "I feel that the closer we get to the real percentage of deaths due to nitrous oxide-oxygen, the nearer we are to the correct position for the method to be placed before the profession.

"Personally I do not regard it as an anæsthetic which can ever be satisfactorily used for major operations in the hands of most surgeons. It is a great deal more dangerous than ether, and also without the addition of ether or some other drug it is impossible to get sufficient relaxation to perform such work. I know of several deaths in St. Louis hospitals and I am sure that there are hundreds more throughout

the country which have never found their way into statistical reports."

Dr. Albert J. Ochsner concludes after a series of 100 cases that the greatest advantage of nitrous oxide-oxygen is the advertising feature. He writes: "I consider it many times more dangerous than ether when given by the drop method. The advertising advantages are the same, of course, as with everything new, the patient being made to believe that it is a much easier and more comfortable anæsthetic. Because hundreds of thousands of teeth have been pulled under the nitrous oxide it is claimed to be harmless. So it is, but in the hands of an expert anæsthetist and with the use of morphine applied hypodermically before the operation, nitrous oxide gas is very unsatisfactory besides being very dangerous."

Dr. James A. Harrar, of the New York Lying-in Hospital, says: "The nitrous oxide-oxygen method was tried on a few cases, not more than half a dozen, by the anæsthetist of the hospital with rather indifferent results. Either the pain was not relieved or else the labor was inhibited. No untoward results were noted."

Dr. Franklin S. Newell, of Harvard Medical School, in answer to a query writes: "I do not use gas on a patient with anything wrong with her heart, or one showing any signs of toxemia, or who is running a high blood pressure. After some communication with the men advocating gas oxygen as ideal in eclampsia I advised a friend to try it on a case I saw in consultation for the introduction of a bag. The patient had acute cardiac dilatation before the bag was placed. She finally recovered but was desperately sick for forty-eight hours. This was sufficient experience. A friend used gas oxygen on a similar case who died under the anæsthetic. I feel that toxemics or questionable hearts are bad risks for this method; ether is better.

"Very few men are expert enough to so regulate the proportion of gases that no rise in blood pressure follows. When a patient is in a serious condition her heart



should not be subjected to any additional strain."

Dr. J. Wesley Bovee, of Washington, writes: "Dr. Warner, medical superintendent of Lakeside Hospital, Cleveland, who installed the plant, makes the gas and has charge of anæsthetizers in that hospital, told me and a group of gentlemen with me, that nitrous oxide is very dangerous, due in no small part to impurities of the halogen group. He would not advise anyone well accustomed to ether to substitute nitrous oxide. And yet the convenience and degree of safety in its administration by an expert leads me to believe it should be a part of the anæsthetic function of a hospital."

Dr. E. Gustav Zinke, of Cincinnati, writes: "I have given up the use of nitrous oxide-oxygen anæsthesia. I know of at least one case, the patient dying before a hysterectomy was completed. The patient was physically a giant, nothing untoward happened in the operation, so no other conclusion could be reached except that the anæsthetic was responsible. Ether by drop method is the ideal anæsthetic."

Dr. Barton Cooke Hirst, in a letter to my friend, Dr. C. A. Ritter, under date November 15, 1915, writes: "I have not tried nitrous oxide, as I would fear the results to the mother in a prolonged administration, and I found some years ago that in beginning ether narcosis with gas for cæsarean section, the infant was badly asphyxiated."

Dr. Charles H. Mayo writes, October 27, 1915: "We did use nitrous oxide in a large series of cases several years ago in minor surgery, and in association with ether in major surgery. However, we gave it up and now use straight ether. We believe it can be used in minor surgery with safety, but its administration requires much greater skill in major surgery."

"There have been a number of deaths but they have not been reported on account of the apparent popularity of the anæsthetic, through the efforts of some of the best men with well trained anæsthetists. Deaths have occurred in Cleve-

land, Columbus, Nashville and Baltimore. Personally I consider nitrous oxide to be more dangerous in general hands than was chloroform before it was given up."

It is pointed out that the mortality in nitrous oxide is due to impurities of the halogen group. That morphological changes like those from chloroform; œdema, fat infiltration, narcosis of the central lobe of the liver and hemorrhages are found in these cases post mortem, the same destructive sequences that occur from hydrochloric acid poisoning. Ether, chloral and other drugs do not have the latter effect, simply œdema and infiltration. Consequently it is easily understood that the cause of death may be entirely beyond the control of the most skilful anæsthetist.

In a personal letter Dr. A. R. Warner, superintendent of Lakeside Hospital, Cleveland, who has charge of all anæsthetics and also the manufacture at that institution of the gas, says they have invented and patented a new process of purification, which will eliminate the dangers from these impurities.

In a case to which the writer was called in consultation, a primipara aet. 39, who had been thirty hours in labor, six hours continuously under the influence of nitrous oxide-oxygen, all progress was arrested and the patient through the exhaustion of the long labor, was having uterine inertia. It was considered advisable in the interest of both mother and child to do a cesarean section, as maternal pulse was rapid and foetal heart tones affected. The foetus at birth was profoundly asphyxiated and with difficulty resuscitated. Its pulse rapidly rose from 40 to 140 after vigorous flagellation, tubbing and manipulations for twenty minutes. With the exception that this patient was above the average age the case was normal. The interference was advised because of failure to effect engagement and in contrast to a high forceps operation.

In another case recently delivered at the German Hospital, the husband, who is himself an anæsthetist, informed the writer that the gases given his wife during

her labor cost him \$22.50. This sum it may be observed is probably equal to the average fee for an obstetrical case.

It is suggested by one of the most competent and experienced of our local anæsthetists that, owing to the emptying of the uterus in labor, a loss of intra abdominal pressure occurs analogous to that observed in the removal of a large ovarian cyst. The blood pressure rises in consequence, ten to twenty points. This rise is increased by the nitrous oxide, if carried beyond the point of analgesia to profound anæsthesia as is necessary in any but minor operations. May this be the danger point noted by Dr. Baldwin who says nitrous oxide apparently kills like sudden deaths from chloroform, not by asphyxia? That is unless the death is due to the alkyl haloid impurities.

The profession is being flooded with literature describing commercial inventions to relieve the operator of responsibility, including descriptions not only of automatic apparatus designed to be used by the patient herself, but the latest ingenuity has an automatic device by which she can also mix the gases.

It is said on the other hand that many cases of alleged nitrous oxide anæsthesia are in fact ether-oxygen, the ether being substituted after the first few whiffs of the gas. The effect thus being psychical; a name with which to charm the patient.

The question to be determined is not what results a brilliant surgeon, like George W. Crile, reports, nor whether Dr. J. Clarence Webster, a distinguished obstetrician with the best trained anæsthetists, has any mortality. What the death rate is from the average clinic, or in the practice of the physician who is handicapped, doing his work without the refinement of equipment of the great hospitals, this is the problem. If the deaths occur in nitrous oxide-oxygen anæsthesia with such startling frequency as has been claimed no further discussion is necessary.

As to the scopolamin analgesia the number of patients treated at the New York

Lying-in, the Long Island College Hospital, the Methodist of Brooklyn, Dr. Knipe's new hospital on Riverside Drive and the Jewish Hospital in New York have aggregated several thousand. Eight thousand had been reported from Freiburg at the beginning of the war.

While it is not claimed that every patient was equally relieved, no maternal mortality is reported and the fœtal mortality is not above that of cases treated without scopolamin. Statements of untoward effects have usually been traced to sensational newspaper stories, or to rumors which could not be followed to any reliable source. It is certain the reports of such men as John Oliver Polak, Ross McPherson, James A. Harrar and William H. W. Knipe, are to be taken absolutely at their face value.

The remarkable interest in painless childbirth among the laity is evidenced by the fact that a gentleman of Kansas City who had been unable to learn of an obstetrician using "Twilight," wrote to McClure's Magazine, asking if there was any physician within a radius of five hundred miles of Kansas City competent and trustworthy to whom he could take his wife for her confinement.

The name "Twilight" is unfortunate as it at once subjects the method to unfavorable criticism as it sounds irregular and unscientific. The New York men have tried to get away from the undesirable suggestion by calling the procedure "Scopolamin semi-narcosis."

Delee in the 1915 Year Book gives a good conservative review of the literature which naturally includes the papers of Bandler and Baer condemning as well as those of Polak and many others commending scopolamin. Bandler is so uncompromisingly wedded to pituitrin no other method of improved technique in labor can appeal to him; while Baer is under the glamour of the Chicago school of nitrous oxide enthusiasts. Dr. Baer had in all sixty cases from which he drew his final conclusions.

It is the duty of the profession to be



prepared to meet intelligently the arguments of our patrons and to crystallize the medical sentiment of the community on all medical matters. In the language of the author of an article on painless childbirth in the October number of the American Journal of Obstetrics, "To either commend or condemn a therapeutic measure without personal knowledge and experience with the drug is unscientific and not in accord with the tenets of progressive American medicine."

In the exceptional case the labor is undoubtedly delayed. The child has been asphyxiated. It suffers, however, similarly from the use of morphine so frequently given indiscriminately to dull the labor pains. General anæsthesia, long continued, to a greater degree than has been realized, the writer believes is the cause of much foetal mortality.

Dr. Rongy in distinguishing between asphyxia and oligopnea, which latter condition often is found in babies delivered by the scopolamin method, quotes Gauss and Holzbach, who believe that oligopnea is due to the depression of the peripheral filaments of the vagus (intra uterine). When the child is born it requires a longer period to accumulate a sufficient quantity of carbon dioxid to stimulate the respiratory center in the medulla. Scopolamin babies, even when born in oligopnea, breathe and cry at once on birth, then both circulation and respiration become shallow, but within ten minutes the child gradually resumes its normal condition. None of these babies, he says, required artificial respiration. He, therefore, considers the condition void of danger to the child when the scopolamin treatment is properly used.

A few words as to the drugs themselves and the method of administration are added. Narcophin is a derivative from opium containing narcotin and morphine in proportion of 1.1—a meconic acid salt—narcotin-morphine meconate. It represents, dose for dose, one-third the potency of morphine. The effects of the narcophin are apparent in from ten minutes to a maximum effect in three hours. The cli-

max is somewhat difficult to calculate because of the variation in the stage of labor, progress of labor pains, and the somnolency produced. The anæsthetic effect is usually greater than the soporific action.

Scopolamin is of the solanacea family. Included in this list are belladonna, hyoscyamus and stramonium. Scopolamin has qualities somewhat similar to hyoscin and atropin. Pharmacologists claim that scopolamin and hyoscin are identical chemically, and it is disputed as to whether the pharmacological effect is the same. Like atropin, scopolamin allays pain; it dilates the pupil; long use depresses the respiratory and vaso-motor centers. Escher says collapse has followed 1/100 grain, 0.006 gram, by the mouth. The patient recovered. A fatal case is recorded following a dose of 1/50—0.0012 gram—in an alcoholic patient with pneumonia. Each had been preceded by morphine ¼ gr. or 0.015 gram. As an anæsthetic it is given in dose of 1/200 gr. or 0.0003 gm. combined with morphin ⅓ gr. or 0.0008 gm. 2½ hrs., 1½ hrs., and ½ hr. before operation. If narcophin is used, 0.5 or ⅓ gr. up to 0.75 or ½ gr. may be used. Recommended before general anæsthesia. Less ether is required. It promotes a tranquil state of mind.

The remedies are given as follows: After the labor is inaugurated so there is approximately three fingers dilatation, and pains are from four to six minutes apart, an initial dose of 0.5 to 2 c.c. of scopolamin hydrobromide 0.03 per cent combined with narcophin 1 c.c. of solution 1 per cent is administered. Suggestion does undoubtedly enter into the treatment, as the curtains must be kept drawn, and the room absolutely quiet. Loud conversation is forbidden after the first dose is given. After a period which is advised should be two or three hours, the patient is to be tested as to her memory, by being asked some question. If she responds readily and intelligently another dose is given, this time scopolamin alone, and in dose of 0.5 to 1 c.c. of the solution, no narcophin being used. Her powers of receiving and main-

taining new impressions are again tested at intervals, and if necessary to continue the artificial hypnosis, the injection may be repeated. Evident onset of disturbance of consciousness should, of course, check additional administration.

At Freiburg it is said this dosage has been kept up for several days; careful attention to material and foetal pulse showing no ill effects on either patient.

The contra-indications are appreciable disturbance of circulation or respiration, severe general debility of the mother; primary uterine inertia arising from gradual diminution of strength of pains; febrile diseases; acute anæmia, premature escape of liquor amnii, precipitate labor, unusually short labor. The combination of scopolamin and narcophin has been recommended in eclampsia; so the question as to its use in presence of nephritis is a moot one. The writer does not recommend its use under these circumstances, but in a limited number of cases it has been tried and the patient escapes convulsions which seemed imminent.

It is convenient to have the solution put up in ampules, but this is not always available on account of the war, the drugs being imported from Germany. In order to obtain a more staple solution of scopolamin, Straub, of Freiburg, adds sextet alcohol mennet to the scopolamin. Dr. Knipe suggests that chemists can as readily make up a staple solution for hospital use, by adding mennet so that 1 c.c. of the solution equals .0003 grams of scopolamin. For convenience, two syringes are suggested, one of 2 c.c. for the narcophin, one of 1 c.c. for the scopolamin.

Notes of time of each injection, subjective symptoms of the patient, facts as to sleep, motions of the hands, color of the face, as well as the usual record of patient under other conditions should be carefully preserved.

The total dosage should not exceed of narcophin  $\frac{3}{4}$  grain and of scopolamin  $\frac{3}{10}$  grain. If necessary to complete any case by general anæsthesia, ether is to be preferred, although nitrous oxide is used by

Polak and others.

*To recapitulate:*

Scopolamin treatment, in the hospital, by Freiburg method is a success.

Its application is limited to cases in hospitals because of the necessity of environment and technique being absolutely under control of the obstetrician.

Delivery rooms in hospitals must be specially protected from light and noise.

Operating room nurses must be especially trained in administration of the drugs and interpreting symptoms.

Untoward results are from overdose, and such unexpected effects are not so much due to unstaple preparations as to individual idiosyncrasy.

Labor is apt to be somewhat prolonged.

Foetal asphyxia has been asserted by some obstetricians.

Patients rally readily because shock is minimized.

Contra-indications: Disturbed circulation or respiration - dystocia, inertia uterina, premature escape of liquor amnii, severe debility of the mother. Scopolamin is not to be recommended in precipitate labor nor in any case where the indications are that the case will not occupy at least four hours. This is because the average patient will require at least three doses and with less the possibility of amnesia is reduced and consequently disappointment may be anticipated. In other words, if scopolamin be selected it should be the choice for the first stage of labor, while if nitrous oxide is to be tried its indication is in the second stage only.

A special trip was undertaken by the writer, who spent November and the early days of December in visiting various points where the scopolamin treatment has been carried on to any extent in this country. The itinerary included a number of hospitals in several cities. Georgetown Hospital at Washington, D. C., where Dr. Henry D. Fry has been using it since July in his charity service, was first visited. Five cases were under treatment or in their puerperal stage. He has not yet adopted the method in private practice.



His results have been generally satisfactory. He has noticed neither foetal asphyxia, delay in labor nor hemorrhage. He is not yet ready to make a report as to his conclusions.

At Johns Hopkins Hospital, Dr. Ploss, under Dr. J. Whittridge Williams, is trying out a series of cases. Dr. Williams believes the Freiburg technique should not be condemned, but is entitled to be tried out in a scientific spirit.

The Jewish Maternity Hospital in New York has on its records 380 cases of patients delivered under scopolamin. The story of the three cases of insanity reported in the newspapers was there explained. The first case had been twice before delivered. She developed puerperal mania with each labor, so this was her third attack of derangement. In neither of her former labors did she have scopolamin. She was sent to the asylum. The second case was a woman with delusions *who did not have twilight*, but insisted she had been given it. The third case was one which was being given treatment at the Jewish Maternity the night Nathan Strauss, the philanthropist, and Arthur Brisbane, the newspaper correspondent, were making the round of the Jewish quarter in the Lower East Side. As they entered the room where the case was just starting in labor, the patient, startled by seeing strangers in the room, reached up and slapped the face of the nurse. She was put into the ambulance and sent to the psychopathic ward at Bellevue. She was discharged next morning as cured. Dr. Scorber of the hospital staff, who related the cases, was in charge of the last two. Two other cases of mental symptoms have occurred at the Jewish Maternity this fall, neither of which had scopolamin.

Dr. J. Clifford Edgar, of Bellevue Hospital, is reported in a newspaper interview to have said insanity does not result from the use of the drug.

Dr. J. O. Polak, of Brooklyn, has had sixty-three cases. These were in the Jewish of Brooklyn, the Methodist and the

Long Island Hospitals. He had three cases of asphyxia of the new-born, but not mortality. All of these in private patients. In thirty-six cases, one series, low foecæps delivery was done eight times. He does not approve of the Siegel method, which was put into effect at Freiburg by Dr. Siegel after Kronig and Gauss went to the front. This modification depends on the routine use of narcophin or morphine throughout the case, and was used at the New York Post Graduate Hospital by Dr. Brodhead in a series of twenty-eight cases, in several of which there was more or less foetal asphyxia.

Dr. W. H. W. Knipe of Gouverneur Hospital, who spent the summer in Freiburg, adopts the Gauss method rigidly in his service. He includes the use of the imported drug which is put up by the hospital druggist with mannet to prevent deterioration, to which much of the ill effect has been attributed. Dr. Knipe has his patient up early, say third day, and out of hospital the fifth in accord with the Freiburg routine. These patients are given exercises the first day and increased the second. He is not yet ready to report his conclusions. About seventy-five cases have been treated at Gouverneur and no mortality has occurred. Twelve cases were in the wards and interviewed, each of whom replied in response to inquiry that if she were to be again confined she would want "Twilight"—because she had no pain. As a matter of fact those who were seen seemed to undergo the same suffering that patients experience under ordinary treatment, but with varying degrees of amnesia forget it subsequently. Dr. Knipe has now leased the old Guggenheim mansion on Riverside Drive, where he has a private obstetric sanitarium.

At the Lying-In Hospital the cases of scopolamin have been largely in the service of Dr. Harrar and Dr. McPherson. The former explained that the method was undertaken for the purpose of counteracting an ill advised wave of lay enthusiasm which was sweeping over the country by demonstrating that the treatment was not

a success. Dr. McPherson said they carried no brief for the system, but are still of open mind. The results attained thus far have so satisfied them that they are continuing the observation until they are finally convinced. They are certainly not condemning the treatment on the present findings. The average number of injections at the Lying-In has been four. The last two cases seen by the writer took respectively, eight and eleven doses for complete anæsthesia. Sixty-five cases had been given the treatment since the report at the American Association of Obstetricians at Buffalo. No untoward effects have been observed.

The attending and resident men in the various hospitals visited are generally conservative in their attitude toward the Freiburg method, although in some instances intensely enthusiastic. They were most certainly courteous in the way they received the writer.

An exceptional opportunity to hear the views pro and con was afforded on the night of November 24, when a meeting of the Obstetrical Section of the New York Academy of Medicine was held, which was called at the request of the Committee on Hospitals and Health of the Academy, to consider the attitude which the Academy should take toward the subject. The meeting was largely attended and the discussion was very free. As the session was executive, nothing should be published of the transactions until the Academy officially gives out its report.

The conclusions drawn by the writer after the unusual opportunity to investigate the Freiburg method as applied in this country are not different from those given in the paper on scopolamin, which he presented in 1914. It is a hospital procedure and not universally successful. It can only be safely used by those who have been specially trained.

It is still felt that scopolamin is not safe in the home confinement, but only to be used in hospital cases, on account of requiring extra nurses and constant watch-

ing of maternal and foetal pulse at frequent intervals.

No asphyxia of the new-born babe has happened, although oligopnea has been observed in several cases. No child has been lost in any case to which scopolamin has been given. Scopolamin is indicated only in the first stage of labor and nitrous oxide if at all only at the end of the second stage. Neither should be used except the attendant has had special training.

In drawing conclusions from the experience with scopolamin it may be said its advantage is in the first stage of labor and after sufficient advance has been made to justify analgesia. Failures are to be attributed to beginning the method in the second stage, to the continuance of the narcophin or morphin after the initial dose and to the failure to accurately interpret the condition of the patient intelligently throughout the labor. She must be given additional doses according to her amnesia, not by the clock.

Rigid adherence to the Kronig technique must be enjoined, otherwise failures should not be charged to it. As to hemorrhage, unusual necessary for forceps, or after results of untoward nature, they were not observed in the cases it has been the good fortune of the writer to have witnessed.

On the other hand no caution is too extreme, or faithful watchfulness too exacting in the protection of mother and child, and no obstetrician should undertake the treatment unless he is willing to devote his entire time to the individual case after the first dose is administered until the labor is terminated.

There can be no doubt that the final benefit to be derived from this remarkable discussion will be that our work will be put on a plane of dignity in the eyes of the laity as well as the general medical profession. Obstetrics will again be classed with Internal Medicine and Surgery as one of the three great departments of medicine.



## Stricture of Oesophagus with Report of a Case.

W. A. WEHE, M.D., Topeka, Kan.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

In reporting this case of oesophageal dilatation, I do not think it out of place to dwell briefly on the etiology, diagnosis and treatment of such condition.

We find these conditions may be caused by a stricture, a diverticulum, or we may have what is known as an idiopathic dilatation. The most common cause of an organic stricture is carcinoma; next cicatricial tissue from an ulceration, trauma from acid, alkali or hot fluid, or lodgment for a long time of a foreign body; next external tumors involving thyroid, enlarged bronchial or mediastinal nodes, aneurysms, pericardial effusions, perioesophageal abscess or spondylitis. They may occur at any part of the oesophagus, but are most frequent at the three natural constrictions; entrance of oesophagus, at bifurcation of bronchi and in region of hiatus of oesophagus (passage through diaphragm).

Symptoms: Difficulty in swallowing is the most common and this depends upon the degree of stenosis, the cicatricial ones come on gradually, first difficulty in swallowing solids, also discomfort. In the low down stricture may be added pain reflected to region of sternum and cricoid cartilage. Next in order is regurgitation of food. In the high up stricture regurgitation occurs early, in the low down it comes on some time later. The regurgitated food is mixed with saliva and mucus.

Care should be exercised to ascertain if the stricture is due to carcinoma or aneurysm.

Occasionally there is a constriction at point where oesophagus passes through diaphragm or we may have a congenitally small opening in diaphragm; or we may have an inflammatory trouble extending to lymph nodes at this point with the resultant cicatrix.

Idiopathic dilatation, cause unknown. Have dilatation over large extent of oesophagus, sometimes over entire length.

Herrick's classification is a quotation from Lessen.

1. Primary spasm of cardia and secondary dilatation with hypertrophy of musculature.

2. Primarily a muscular weakness, atony of the wall with secondary dilatation, then spasms through irritation.

3. Contraction of cardia through defective vagus innervation and the circular fibers relax. This class is based on Kraus' experiments on animals and he thinks it occurs in man.

4. Primary oesophagitis, secondary reflex spasm of cardia, then dilation.

5. Congenital pouch just above cardia—Germans call it *Vormagen* or cardial ant- rum. This may dilate from accumulation of food and constant pressure.

Sippy states that spasm is of nervous origin and likely to be found in nervous individuals. May develop after profound emotional disturbances, from fright, grief, worry, or a blow. Sometimes follows an acute infectious disease. May develop in three stages.

Spasm with difficulty in swallowing but no regurgitation of food.

Cardio-spasm with immediate regurgitation.

Cardio-spasm with dilated oesophagus and retention of food and regurgitation at irregular intervals.

Some physicians who had examined this patient thought that he had cardio-spasm and that the use of a tube was unnecessary. To me the most rational explanation was that he had a diverticulum or a dilation resulting from an old inflammation at the cardia. After many attempts at X-ray pictures, I came to the conclusion that there was a marked narrowing just above the diaphragm. This lip formation obstructed the passage of both food and the tube. The tube met with no obstruction until nearly all was passed and the X-ray showed the tube making an almost transverse excursion on entering the stomach.

The facts in the case were that we had an old inflammatory stricture at the car-

diac entrance of the stomach and just above the diaphragm. Naturally we have a narrowing of the œsophagus at this point. We had in addition a very active tuberculosis of right lung and pleura, which extended to the small amount of lymphoid tissue of this point. As time went on the opening became more and more narrow and would have closed completely but for the constant dilation with a hard and stiff rectal tube of large caliber.

One can easily see how tight the stricture was when the non use of the tube for a few days preceding his death made it sufficiently tight to hold water. Even the addition of the city pressure would not force water into the stomach.

The peculiar part of this stricture was that as soon as the external fibers were loosened the wall of the œsophagus unfolded and permitted, with very little pressure, the passage of a finger.

"M. W.," age 69, white male ex-soldier, had usual diseases of childhood. Was in good health until 1888. He had a slight cough. Noticed some difficulty in swallowing. About this time he began to lavage stomach once a day. Seemed to give him some relief. In 1895 he became very ill, following an injury to his right side, was septic; coughed considerable.

As soon as he was able to travel he went to Florida. He did not improve until one day, after a paroxysm of coughing, he began to raise quantities of acrid pus. Within the next few weeks he was able to leave his bed and go about the yard.

With the improvement in his lung came more difficulty in getting food into his stomach. All food swallowed would have to be removed from œsophagus with a tube or in time it would be regurgitated. The food regurgitated was mixed with saliva and mucus. There was no gastric juice in the mixture.

He soon found that he could not get food into the stomach in the usual way and, if taken without the aid of a tube, it would have to be withdrawn and the sacculated part of the œsophagus washed out

before he could be comfortable. Even water met the same fate.

He came to Topeka in 1896 and soon after his arrival I was called to attend him. He had pain in right chest, chills, fever and sweats. Percussion revealed an area of dullness. After suffering for several days he would expectorate large quantities of mucopurulent material and the symptoms would subside. My explanation was a cavity connecting with bronchi. This would fill, he would become septic, then relief came with the expectoration. Another peculiar condition was an œdematous spot above and to the inner side of the right scapula. He had a mitral regurgitation, arterio sclerosis (marked). Blood pressure S. 190.

For years he remained about the same. Five years ago he began to have tingling sensations in his legs. All reflexes were present (not exaggerated), muscular sense present, could walk in the dark, stand with eyes closed. The lack of objective symptoms, to my mind, ruled out cord trouble. I tried to explain the phenomenon as the result of the condition of his heart and blood vessels and their effect on the skin; arms not affected.

The œsophageal trouble remained about the same. The only food or water that passed into stomach was poured through a tube. Can you imagine a man pushing a tube into the stomach from ten to twenty-five times a day? Sometimes food that was put into the stomach had to be withdrawn and the stomach lavaged before he would get relief from the burning pain.

In order to satisfy the craving for food he would eat a meal without the tube. This food could not stay long in the dilated œsophagus without causing pain. He would withdraw this and lavage the œsophagus.

We made many attempts to show just what was the obstruction. We filled the sac with bismuth and gruel and examined with flueroscope. The most satisfactory result was with the tube and a chain. The tube showed well to the right and then went almost horizontally to the left and



into stomach.

Later I illuminated the stomach with a gastrodiaphone and found that it was well to the left and what was taken for the pylorus seemed almost at the umbilicus. This at autopsy proved to be the cardiac half of the stomach; the pyloric half was very much contracted.

Kidneys gave a variable picture, one period would show much trouble and then they would be apparently normal.

Last illness began in September, 1913, with shortness of breath and pain in region of stomach. On examination found heart dilated and intermittent. Palpation over abdomen showed tenderness over stomach, liver dullness increased, splenic dullness not increased, dullness and an indefinite something in right iliac region. Urine showed few granular casts, occasional red cell, some pus, trace albumen, no sugar, urea 7 gr. Sp. gr. 1012, acid. As he was passing urine pretty often, I passed a catheter and found one-half ounce residual urine. He was weak, had much difficulty in passing tube. One day he would be better, next day worse. The fore part of November his heart condition became worse, was asthmatic. Urine showed albumen, blood, pus, granular casts, quantity not so large. Stomach would not tolerate food. Was losing flesh.

Last week of his life was unable to separate the heart sounds—all merged. Urine more scanty, bloody. Became semi-conscious and died December 1, 1913.

Autopsy: Man fairly well nourished. On opening abdomen found mesentery extremely well padded with fat. This was especially true of mesentery of colon and cæcum accounting for the movable and palpable mass on right side. Stomach contracted from oesophagus to pylorus. Pylorus about the size of small intestine. Pyloric end bound down, cardiac end drawn up and bound to diaphragm and under spleen. Gave stomach a gourd-like appearance. Intestines apparently normal, pancreas somewhat enlarged, hard, felt nodular, gall bladder normal, kidneys enlarged and congested, prostate slightly en-

larged, bladder normal. Thorax—found right lung bound down, cavities, upper lobe a mass of caseous matter (tubercle). Left lung, upper lobe, had suspicious masses. Heart very much enlarged, flabby, aorta atheromatous, could break between fingers, oesophagus very much dilated 4½ inches in diameter. Oesophagus with stomach removed, stricture found at crura of diaphragm, caused by inflammatory deposits around oesophagus. Sections taken from lung, liver, pancreas, kidneys.

Report—

Lung, tubercular.

Glands, tubercular.

Liver, cirrhotic.

Pancreas, chronic interstitial pancreatitis.

Kidneys, interstitial nephritis with an acute congestion.

Prostate, chronic, probably from blood vessel changes.

Blood vessels, atheromatous.

Fatty deposits in mesentery.

The surgery in these cases is to keep the stricture open by use of bougie. In this particular case, all things being equal, I do not see why he would not have been benefited by opening the abdomen and loosening some of the adhesions, then keeping open stricture by occasionally using a tube or bougie.

—————R—————

### **A Case of Tinea Barbae Clinically Suggestive of Actinomycosis.**

RICHARD L. SUTTON, M.D., Kansas City, Missouri.

Professor of Dermatology, University of Kansas Medical School; Dermatologist to the Christian Church Hospital.

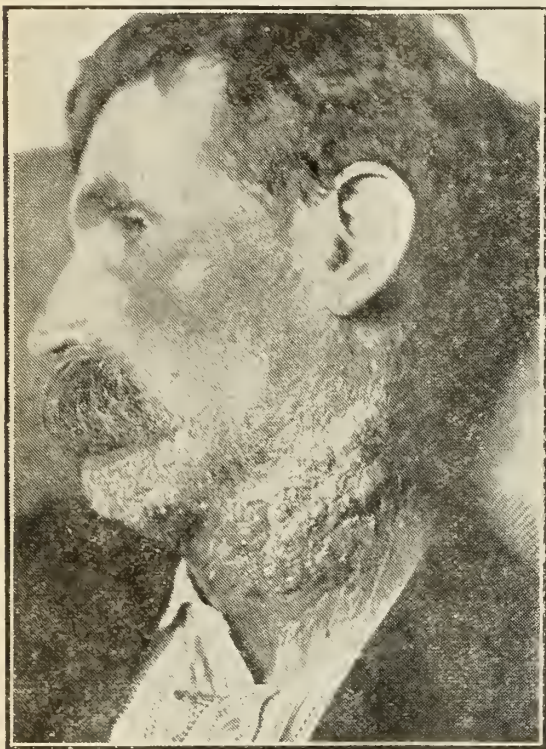
In the majority of instances the symptomatology of ringworm of the bearded region is so typical and so clearly defined that the average trained observer experiences very little difficulty in arriving at a correct conclusion regarding the identity of the disease in question. The superficial type may bear some resemblance to seborrhœic dermatitis, sycosis vulgaris or the early discoid or late circinate syphiloderm. In the deep-seated, nodular variety

confusion is less likely to occur, although syphilis and syphilis must be excluded here also, and occasionally a lesion is encountered which closely simulates carbuncle.

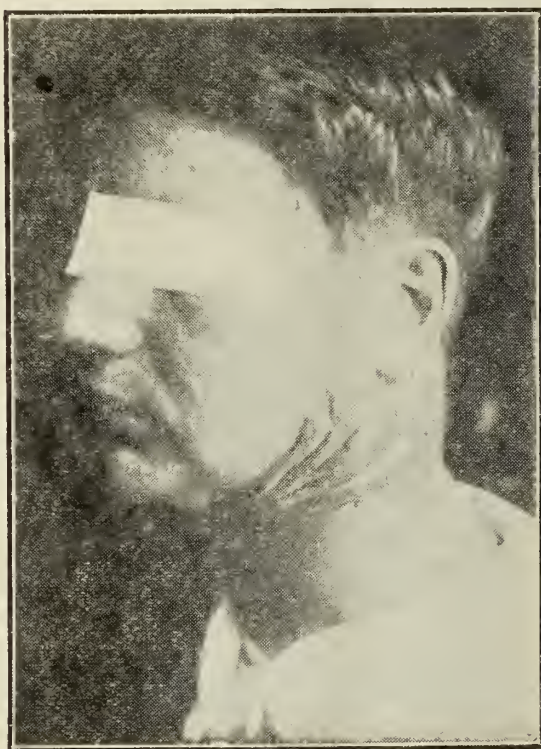
Recently I saw an example of the deep-seated type which was suggestive of actinomycosis, particularly in view of the history. The patient was a married man of 45, a stockman, referred by Dr. J. Archie Robertson, of this city. The family history was negative, and the patient had never before suffered from a skin disease.

the employment of various household remedies the lesion refused to heal. In the course of a fortnight several new ones developed.

On examination, the patient was found to be a slender but muscular man, with brown hair and eyes. The disease was confined to the left side of the neck, and the affected area measured about 7 by 12 cm. The lesions consisted of a series of deeply placed, nodular masses, roughly arranged in three rows which lay parallel with the lower jaw bone. The neighbor-



Case 1—Tinea Barbae, Three Months' Duration.



Case 2—Actinomycosis, Eighteen Months' Duration.

Insofar as he knew he had never been exposed to trichophytosis. A few weeks prior to the appearance of the lesions on his neck he had assisted a neighbor who was administering some medicine to a cow that had "lumpy jaw," but he thought there were no open wounds on his skin at that time through which infection could have occurred.

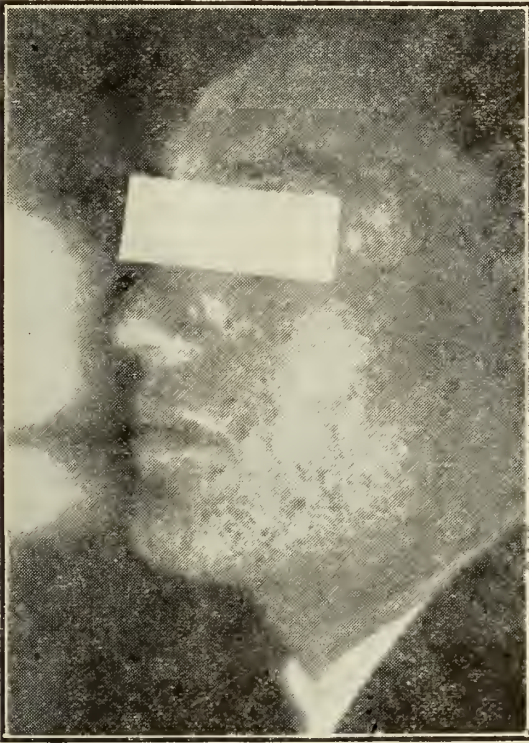
About one month afterward he first noticed a small, almost painless, oval topped abscess on the left side of his neck, just below the angle of the jaw. Despite

ing lymph nodes were palpable and tender. Beneath the chin was a large, boggy, carbuncular tumor which appeared to have no connection with the cervical lesions. The patient's beard was long and stiff, and projected upward out of the inflamed elevations to the distance of 1 cm. or more. A few of the hairs could easily be extracted, the outer root sheath coming away with the shaft, but the majority appeared to be unaffected. A careful search of some of the freshly expressed purulent material showed only staphylococci, but a dozen or

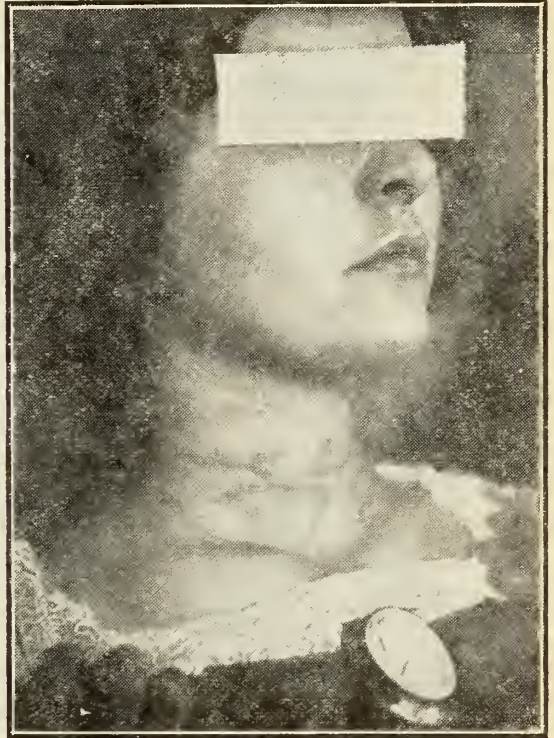


more of the loose hairs, from both the cervical patch and the lesion beneath the chin, were found to contain large numbers of ringworm fungi (large spored endothrix variety).

Dr. Jabez N. Jackson, to whom the patient applied for treatment. The diagnosis was verified microscopically by Dr. Jackson's associate, Dr. Otto Leslie Castle, and I am indebted to Dr. Castle for the case history.



A Typical Case of Sycosis. Five Months Duration. A few papules and many pustules are present, but no deep-seated abscesses.



Circinate Seborrhoeides Somewhat Resembling the Superficial Type of Tinea Barbae.

For comparison, the following case of actinomyces is of interest. I am enabled to report it through the courtesy of

The patient was an unmarried man, a student, aged 18. One of his brothers, a farmer, aged 33, had been troubled for several years with an inflammatory process which involved the skin and lymph



Circinate Syphilide of the Face, Bearing a Superficial Resemblance to Ringworm.



Circinate Syphilides of the Face, Six Weeks' Duration.

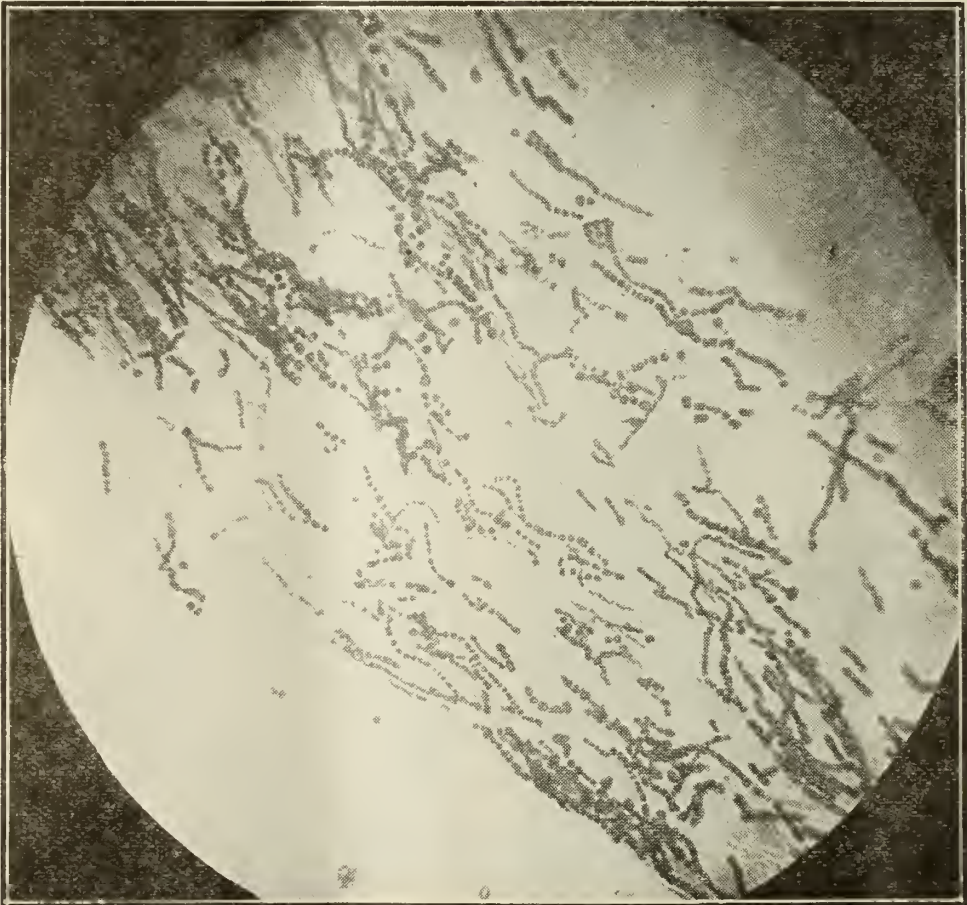


nodes on the right side of his neck. The condition had been pronounced tuberculous, and injections of tuberculin had been employed as a therapeutic measure, but complete healing had never taken place. Otherwise the family history was negative.

The patient had lived on a farm until his sixteenth year, and since then had resided in a small town. So far as he knew he had never been near an animal suffering from actinomycosis or a similar disorder. The present illness had existed eighteen months, and had begun on the left side of the neck, at a point near the center of the corrugated area shown in the accompanying photograph. There was some swelling, with slight reddening of the skin, but very little pain at first.

Later the swollen mass broke down, and two or three small openings developed, a considerable quantity of yellowish-green pus being discharged. The patient said this material resembled a solution of copperas with many small granules in it. There was no history of tonsillitis or of fever preceding the attack. Early in 1914 the lesion was incised and drained, several ounces of odorless pus and mucus being removed. Since that time the patient had received very little treatment of any kind.

A microscopic examination of the discharge revealed the presence of a few actinomyces and many polymorphonuclear pus cells, but no tubercle bacilli or pyogenic cocci.



Trichophyton of the Endothrix Variety, from Case I  
No. 4 eyepiece, 20 cm extension).  
(stained by Brongersma's method. Leitz 6a obj.,



## A Safe Way to Remove the Tonsils of Small Children.

DR. THOS. L. HIGGINBOTHAM, M.D., Hutchinson, Kansas.

A conscientious effort is constantly being made to eliminate, as far as possible, the dangers of tonsil surgery. This is shown by the introduction of mechanical devices to control hemorrhage; by the administration of drugs and serums to increase blood coagulation; by improvement in quality and administration of anæsthetics and a tendency, on the part of physicians, to cooperate with surgeons specializing in tonsil removal.

Many things remain to be done before it can be said that the tonsil enucleation is an absolutely safe operation; some existing customs must be revolutionized before it can be said that even the minimum of safety will have been reached, chief of which is abolition of the general anæsthetic.

The more experienced and conservative operators have already discarded the general anæsthetic, when operating adults, young adults and children, of sufficient size to exercise self-control, for the more refined and far safer method of "peritonsillar infiltration."

This has greatly reduced anæsthetic danger, but, unfortunately, local anæsthesia is impractical when operating children, since childhood represents the period in which the vast majority of tonsil work is being done, it also represents one of the extremes of life in which general anæsthesia is most fatal.

Since beginning the removal of inflamed tonsils for the cure of tonsillitis and diseases second to it, I frequently come in contact with cases, in children, whose physical condition precludes the administration of a general anæsthetic, as when the heart, kidneys and lungs are involved.

Finding that this class of cases could be safely operated without anæsthesia, I have adopted it, as a matter of routine, for all cases of eight or nine and under, provided the parents' consent can be secured,

which is now possible in 90 per cent of my operations on children.

By operating adults, young adults and children of sufficient size to exercise self-control, under local anæsthesia, and children without anæsthesia, we are then, approximately, able to confine the use of the general anæsthetic to patients ranging in age from ten to fourteen, at which period of childhood general anæsthesia is least dangerous.

It might be said that to hold a child, for this operation, would be inhuman, but if we stop to consider that all properly anæsthetized children must be held from five to ten minutes, to be greatly frightened and endangered, then less hesitancy *SEVENTEEN—Medical Journal* Rich should be felt in holding the child for no longer than a minute, especially when safety is added and better work can be done.

It has been said that simplicity in technique and instrumentation are two indispensable factors in doing successful surgery, and if true, its application is made forcible in the removal of tonsils without an anæsthetic.

I perform the operation as follows:

The child is placed in the lap of the assistant, who sits before an open door or window, as if to do an intubation; a Whitehead mouth-gag, without attachments, is inserted and opened sufficiently wide to be retained—this places the patient on the "gag," the ideal position for rapid and thorough enucleation—the vision is unobstructed and the glands protrude, from behind the pillars, forward and inward.

A Tyding Tonsil Tenacula, without catch, is passed through the "loop" of a properly wired Tyding Tonsil Snare to grasp the tonsil firmly near its center; traction is made with the tenacula and at the same time the "loop" is made to pass around the partly evaginated gland to settle snugly about the base as the "loop" is drawn "home."

Two Tyding Snares should be threaded, as time would be lost in rethreading for the second tonsil.

In case the tonsils be phymosed or deeply imbedded, a pair of Boettcher scissors should be at hand for slitting the "hood" as in slitting the foreskin in phymosis of the prepuce, or exposing the glands penis in circumcision.

The epipharyngeal tonsil, or adenoid, is now removed with the smallest sized La-Force Adenotome, the gag disengaged and patient held over a receptacle until bleeding ceases, which is less, by half, than with ether anæsthesia.

#### SUMMARY.

1. This method will reduce the anæsthetic mortality of tonsil surgery more than 50 per cent.

2. The operation can be done with great rapidity and accuracy, due to excellent vision and accessibility of the structures.

3. It permits patients to be operated who have conditions contraindicating a general anæsthetic.

4. It permits physicians to render assistance to patients not physically or financially able to be transported to surgical centers.

5. It permits of a needed tonsil enucleation being performed on children whose parents justly object to a general anæsthetic.

6. It permits of the operation being performed without the aid of skilled assistants.

7. The operation is no more inhuman than the extraction of a tooth or digital examination of the adenoid.

8. We recommend this method because it decreases the danger of tonsil surgery and educates the laity to have the work done at that period of life when most good is accomplished.

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## MISCELLANEOUS.

### Wounds of the Diaphragm.

C. C. Green, Houston, Texas (Journal A.M.A., July 15, 1916), while noticing the comparative paucity of the literature, reports six cases of his own observation of stab wounds of the diaphragm and stab wounds involving the diaphragm and caus-

ing the abdominal viscera to pass into the thorax. The total number of such wounds that he has found reported heretofore is 123, or 129, including his own cases, in all of which there was evisceration of the stomach and other abdominal organs upward through the diaphragm. In all cases the hernia was reduced, in most after a supplementary thoracotomy. Two of the six patients died; the others recovered. The diagnosis was readily made before operation in all the cases except one, as the omentum was protruding through the external wound in all the others. Where this symptom fails it may be difficult, and he says that consequently, in cases in which a quick diagnosis is not possible, we have reason to believe that there is injury to the diaphragm and probably to the abdominal viscera. He believes that it is not only the surgeon's privilege but his duty to resort to an exploratory thoracotomy, and he pleads for the more general use of such a measure.

—————R—————

### To Remove Blood Stains.

One of our correspondents gives us the following method for removing blood stains from linen and white goods.

"Soak the article in cold water about twenty minutes after first rubbing the stained portion liberally with soap and kerosene. Wash and rub well in several suds of soap and warm water. (A sudden plunge into hot water will set the stain.) Then boil and bleach in the sun. This does not injure the fabric."

—————R—————

Things are not harmonious in the medical profession of Minnesota since the affiliation of the University and the Mayo Clinic. There be those who seem to think that the interests of the State and those of private individuals and corporations do not mingle very satisfactorily.

—————R—————

In cases of chronic arthritis, after you have removed the tonsils and adenoids, drained the sinuses and drawn the teeth, you may now proceed to do a colectomy or ileosigmoidectomy.



# THE JOURNAL

*of The*

## Kansas Medical Society

W. E. McVEY, M.D. - - - - - Editor

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### Should the Chartering of Educational Institutions Be Controlled?

Perhaps it is the very close relation between the Church and the College that has rendered the latter immune to legislative interference or legislative control, for colleges are largely of the denominational type. Or perhaps it was on account of the early need for educational institutions, and in recognition of the extreme difficulties under which colleges were established and maintained, that a free rein was given to the pioneers of Kansas and other states, who had indomitable courage, inexhaustible philanthropic spirit, but totally inadequate funds, who founded the little colleges throughout the land, and often impoverished themselves in their maintenance and development. There were no dividends possible, there was no hope of reward and no thought of self aggrandisement. They were devoted to the cause of education, and there was no desire and no need to restrain their ambitions or to control their efforts. Those colleges were readily given authority by the State to confer such degrees and titles as were then in vogue, and there was never a question as to the possible abuse of such authority.

The curriculum was usually the same as that followed by the larger schools and the

graduates usually justified the efforts of their instructors.

Had the same conditions, under which these colleges were founded, continued to prevail there would still be no occasion for legislative control. There is now, however, a real danger that the authority to confer degrees, which has been so freely given by the State, may be used for purposes not contemplated in the early history of education. The field of education has expanded so that there are now schools for every profession and almost every trade, granting certificates of proficiency to those who complete the various courses of instruction. Special degrees and titles are devised and conferred which have no real significance except as inducements to prospective students. There is an element of commercialism in many of these schools of special instruction which contrasts very strongly with the motives which impelled the founders of our earlier colleges. There is no standard curriculum for the majority of them. This is true of professional as well as trade schools. The regular schools of medicine are the only ones which have generally adopted a high standard curriculum, and it is this fact which has led to one of the conditions which demands legislative control or, at least, some restrictions upon the chartering of schools and colleges. The rapid reduction in the number of medical schools and the increase in the requirements for graduation opened an attractive and profitable field for "schools" and "colleges" which, by short-cut methods or by courses in special subjects relating to the practice of medicine, could enable their "graduates" to evade the medical practice laws of the various states.

In his report to the Council on Medical Education of the A.M.A. the Secretary says:

"The largest number of these institutions at present is found in Illinois, where conditions are especially favorable. Besides the two Class C medical schools which continue to exist, there are in Illinois colleges of osteopathy, chiropractic, chiropody, naprapathy, somopathy, psycultopathy, refraction, optics, and a legion of others, most of which have for their chief inducement elegantly printed diplomas conferring the degree of "doctor" of this, that or the other. The

courses offered for such degrees are in some instances so notably a makeshift as to be ridiculous, and an insult to education. Some are offering courses under two or more titles and others appear to be doing a retail business in dispensing degrees in all the "forms" or "systems" of healing which may have been or ever shall be enumerated."

In Kansas there is no law governing the chartering of schools or colleges. Any coterie of men may apply for and receive a charter for a college with full authority to grant degrees. There are only eleven states which have laws upon this subject and few of these are adequate to protect the public against fraudulent or insufficiently equipped institutions. A very succinct analysis of these regulations was given by Secretary Colwell in his report. He says:

"New York at present appears to have the most complete control of educational institutions, since very early in the history of the state, through the wisdom of Alexander Hamilton and others, a well organized department of education was established. In Maine, Massachusetts and North Carolina a special act of the legislature is necessary before an educational institution can obtain legal authority to grant degrees. In Arkansas, Indiana, Maryland, New York, Ohio and Pennsylvania the charter must be obtained, directly or indirectly, through the State Board, or Department of Education, or through a committee (Pennsylvania) closely connected with that department. In Nebraska application must be made to the judge of a district court, whose duty is to appoint one or more commissioners to investigate and vouch for the claims of the applicant. Even in some of these states the authority has apparently been made to cover only so-called academic colleges and universities. From what has been said it is clear that such authority should be extended to include all institutions professing to give instruction in any subject, especially those bearing the name of "school," "academy," "college," "university," or the like, and also all institutions granting degrees of whatever kind. The menace from irresponsible educational institutions is much greater than is generally understood, and the number of institutions, in some states particularly, is rapidly increasing. Furthermore, the flagrant use, by many of these institutions, of questionable and misleading methods passes all comprehension."

Although Kansas has not suffered to the extent that Illinois has from its lack of legislation upon this subject, it is not safeguarded in any way against the invasion of these schools of drugless practice and title factories in other departments of education. We need some law providing for careful supervision of the granting of charters to educational institutions.

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#### Organic Heart Disease.

A great deal of talk, much enthusiasm, a considerable amount of work and some

money, have been expended in a widespread movement to prevent the further spread of tuberculosis. But, although the mortality from organic heart disease is considerably greater than that from pulmonary tuberculosis, no particular effort has been made to definitely determine the causes or prevent the occurrence of this disease.

No doubt the general recognition of an element of infection in tuberculosis has had much influence in the widespread effort for its control, but the fact must not be lost sight of that the incidence of valvular disease of the heart is at least frequently associated with some of the acute infections; and, in consideration of the prevailing opinions as to the relation of acute rheumatism to focal infections, one may say that organic heart disease most frequently has its origin in diseases which are preventable and is itself, to a considerable extent, a preventable disease.

If it may be regarded as in any degree preventable, the fact that the mortality from organic heart disease is greater than that from pulmonary tuberculosis should be sufficient to justify some systematic and widespread effort for its control.

The mortality statistics for 1913 show that in the "Registration Area of the United States" there were 87,755 deaths from organic heart disease, while there were but 80,812 deaths from pulmonary tuberculosis. While the mortality from tuberculosis has decreased rather steadily since 1904, that from organic heart disease has shown a tendency to increase. Many of the infectious diseases with which the incidence of cardiac lesions have sometimes been associated are no longer—or very rarely—epidemic, but there remains a considerable number of preventable diseases, fairly constant in their occurrence, which have frequently been held responsible for such lesions. During recent years a very active effort has been made to find and eradicate known sources of infection for acute articular rheumatism and the results of this work will ultimately be observed in a decreased mortality from or-



ganic heart disease.

The evidence upon which is based our conclusions as to the relation of many diseases to the occurrence of valvular lesions is too frequently indefinite and uncertain. It is customary on finding the physical signs of valvular disease in a young person to ascribe it to some recent, or remote, attack of acute rheumatism, if such has occurred, if not, then to whatever acute infectious disease has been most in evidence. A recently discovered valvular lesion is likely to be attributed to the last illness when in reality it may have antedated that illness by several years.

Any effort to lower the mortality from organic heart disease and to minimize its occurrence must begin with a systematic study of its true etiologic relations to preventable diseases. That much may be accomplished in the prevention of this condition seems reasonable, but a great deal may be accomplished in decreasing the mortality by more careful attention to cardiac convalescence and by better treatment of conditions of decompensation.

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### Doctor Wins Slander Suit.

In a suit for slander, brought by Dr. Josephine Eshom Davis, of Ottawa, against Mrs. J. T. Shreve, wife of a minister of the same city, a verdict was rendered for the plaintiff and the damages assessed at one dollar.

It seems from the reports of the trial that a nineteen-year-old, unmarried, pregnant girl—a former patient of Dr. Davis—when about seven months pregnant, had been seized with convulsions. Other physicians had been called in and a diagnosis of eclampsia was made. The girl was immediately delivered and made a rapid recovery. During the illness of the girl Mrs. Shreve had been called in as a friend of the girl and to assist the nurse. It was charged that Mrs. Shreve, at that time, made statements to the nurse and others to the effect that Dr. Josephine Eshom Davis had administered drugs to cause a miscarriage. Similar statements, it is

claimed, were made at other times and places.

The defendant admitted that in a private and confidential consultation with the nurse in charge she did express the opinion to the nurse that the girl had taken some kind of medicine to get rid of the unborn child and was suffering from its effects, and further expressed to the nurse the opinion that the medicine had been obtained by the girl from the plaintiff. She did not claim to have any knowledge of the fact and was not stating it as a fact, but only what she believed from the circumstances.

In his instructions to the jury the judge called attention to the fact that when slanderous statements are spoken in the presence of others they are published, in the meaning of the law. He also instructed the jury that "a slanderous statement, spoken as an expression of opinion on the part of the speaker, is as effectual as if made in positive language; that the speaker must be understood to assert that he has in his possession evidence sufficient to convince him that the charge is true. So that, if the defendant uttered the words charged in the first or second cause of action as being her opinion, and they were untrue, it is just as slanderous as though she had stated them as a positive fact." The jury was also instructed, "If the girl in question told Mrs. Shreve in substance that Dr. Davis, the plaintiff, had administered to her the medicine for the purpose claimed, and that statement was false, that would be a slander against Mrs. Davis on the part of the girl; and if Mrs. Shreve repeated that statement it would be a slanderous statement on the part of Mrs. Shreve, the rule being that a person who repeats a slanderous statement is himself responsible for the slander."

No evidence was introduced to prove that the statements made by the defendant were true. In fact the defendant had practically admitted that she had no grounds upon which to base her opinion.

**Dr. J. E. Oldham.**

Information has been received of the death of Dr. J. E. Oldham, Wichita, Kansas. Dr. Oldham was one of the old guard in Kansas and was well known throughout the state. He was at one time President of the Kansas Medical Society and a few years ago was an active participant in society affairs. Dr. Oldham died at his home in Wichita, September 3, of nephritis.

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**Bulletin No. 10**


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**A CONDITION, NOT A THEORY****Doctor:**

The cost of paper, ink and all the materials entering into the publication of this Journal has recently advanced from 50 to 100 per cent. How is the increased cost to be met?

**Three Methods are Possible:**

FIRST—*Decrease the number of reading pages.* We think this would be unwise.

SECOND—*Increase the per capita assessment.* This may become necessary, but we hope it can be avoided.

THIRD—*Increase our advertising income.* The present advertising rates are equitable. Hence, any increased income must come from increased advertising patronage.

**HOW?**

FIRST—By patronizing our present advertisers, and letting them know it.

SECOND—By asking druggists and other firms you patronize to handle the goods we advertise.

THIRD—When a detail man calls on you, ask if his goods are approved by the Council on Pharmacy and Chemistry; and if his firm uses *your* State Journal. If not, why? Also when you receive samples and circular matter by mail, see if the manufacturer is using *your* Journal. If not, write and tell him he should. Advise us that you have done so.

FOURTH—If there are supplies you want that are not advertised, please tell us about them, so we can show manufactur-

ers that our pages are desirable mediums for their announcements.

A reasonable reciprocity is justifiable—this is *your* Journal. More revenue is needed to meet the increase in cost. A REAL CONDITION MUST BE MET.

The solution of the problem is with you. Write us, or our advertising representatives, the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Ill. Your cooperation will show your interest in the welfare of *your own* Journal.

**YOUR EDITOR.**


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No one has a satisfactory explanation for the phenomenal increase in the prices of drugs. The prices of some of the simplest herbs, which can be found in abundance, and the supply of which the European war can in no wise effect, have more than doubled. A certain tablet which was formerly listed at \$3.50 per thousand is now listed at \$7.75 per thousand, and yet the drugs contained in a thousand of those tablets cost less than \$2 at the present prices. Before the inflation the drug content of a thousand of those tablets was worth perhaps seventy-five cents. That they could be made at a profit for \$1.25 per thousand we know—before the inflation. Upon what commercial principle have the manufacturers raised the price of those tablets more than a hundred per cent? This is only an illustration of hundreds of instances of the same kind.

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We commend the promptness with which Dr. Josephine Eshom Davis resented the charges made against her and the vigor with which she prosecuted her demand for vindication. If we were all as prompt and determined in running down malicious stories there would soon be fewer of them to run down.

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Should you have a case of extreme narcosis from opium poisoning, with very infrequent respirations—one which does not respond to other respiratory stimulants—try ice-water enemas.



## SOCIETIES.

### Northeast Kansas Society.

The regular meeting of the Northeast Kansas Society will be held in Leavenworth on Thursday, October 26. The program is not yet completed, but the secretary informs us that an especially interesting program may be expected. Several scientific papers out of the usual order have been promised.

### Harvey County Society.

The following program has been prepared for the October meeting of the Harvey County Society:

#### *"Blood Diseases."*

"Acidosis," Dr. Max Miller.

"Pseudoleukemias," Dr. A. J. Wedell.

"Gleanings from the Journals," Drs. J. T. Axtell, Graybill and Hempsted.

### Morris County Society.

At the September meeting of the Morris County Society which was held in Council Grove, September 19, a paper was read by Dr. Robert B. Hutchinson on "Local Injuries and Their Effect on the General System." A paper clinic was given by Dr. Albert Beam.

### Tri-State Medical Society in Kansas City.

This association will hold its annual meeting in Kansas City, under the presidency of Dr. A. B. Middleton, Pontiac, Ill., October 26, 27 and 28, 1916. All sessions will be held at the Hotel Baltimore, which will be headquarters. Arrangements are in progress for this meeting, and a large attendance is anticipated. Committee of arrangements: Drs. J. D. Griffith, R. M. Schaufler and C. B. Francisco. Rooms should be engaged at the Baltimore early to insure accommodations. Titles of papers should be sent to Dr. Charles H. Parkes, 25 E. Washington Ave., Chicago.

### Golden Belt Society.

The Golden Belt Medical Society met in

Salina, Thursday, October 5. The following program was presented.

Iritis—Dr. O. R. Wolfe, Beverly, Kan.

The Treatment of Fracture by Autogenous Bone Graft—Dr. Chas. Geiger, St. Joseph, Mo.

Glands of Internal Secretion and Their Relationship to Physical and Mental Development—Dr. W. W. Duke, Kansas City, Mo.

#### DINNER.

#### *Evening Session.*

Fractures of Skull—Dr. R. C. Lowman, Kansas City, Kan.

Case of Fibrous Osteitis of First Metatarsal Bone—Dr. J. C. Wilhoit, Manhattan, Kan.

There were about fifty in attendance at both afternoon and evening sessions. It was a particularly interesting program. Visiting physicians were entertained at dinner by the Salina men. The January meeting will be held in Manhattan.

### Shawnee County Medical Society.

The regular monthly meeting of the Shawnee County Medical Society was held Monday evening, October 2, at the State Hospital.

Dr. C. B. Burr, of Flint, Michigan, was the speaker of the evening. Dr. Burr is the author of several books on the subject of Psychiatry, and is past president of the American Psychiatrists' Association. He read an extremely interesting paper on the diagnosis and treatment of the more common of the nervous disorders, and at its conclusion presented a clinic of ten, illustrating the conditions he had described.

It was one of the best attended meetings we have had for some time, and one of the most instructive meetings we have had in many a day.

A light lunch was served.

Dr. Charles H. Lerrigo, author of "Old Doc Williams" and "The Castle of Cheer," was voted into the membership of the Society.

### Reed's Bacillus of Epilepsy.

A. J. HINKELMANN, Galesburg, Illinois.

Director Galesburg Laboratory. With One Illustration.

Through the work of Reed,\* the question of a specific organism as the exciting cause of the seizures of epilepsy has been set forth. Having previously worked from a different basis with an organism I believe is the same as the one isolated by Reed, and having since the appearance of his articles, succeeded in finding the organism in the blood of an isolated case of epilepsy, I am in a position to add a few facts to what Reed has already said. I am sure this will be of further aid to the profession in the direction of reaching final conclusions as to the significance of the organism.

#### METHOD OF INVASION OF HUMAN SYSTEM.

Under this head, Reed has made very clear the point that the organism is evidently taken into the intestinal tract by way of the mouth, and enters the blood through a cecal or an appendiceal focus, and leaves the question open as to the danger of communication. What would be the consequence in case the organism was ingested by a normal individual, and to what extent may those with predisposing lesions expect to escape infection?

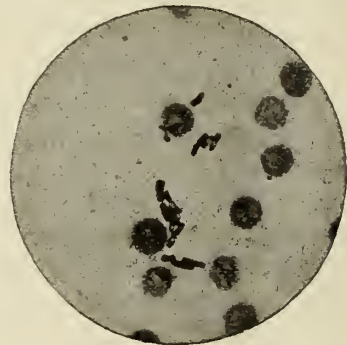
From a basis of experiments I conducted during the summer of 1915, and before I had any knowledge of the pathology of the organism, it may be stated that it is a very frequent inhabitant of the intestinal tract of probably the majority of people. *Medical Association*, January 29, and May 20, 1916. My conclusions at the time of my experiments were that it is one of the regular members of the so-called intestinal bacteria.

My interest in the organism was its high resistance to germicidal agents, and through this fact it becomes an easy matter to demonstrate its presence in the intestinal flora and also that it is commonly present. It will live in phenol solutions of from 5 to 10 per cent for many hours and a much higher strength is necessary to kill it instantly. Among the very large

number of different species of bacteria that are usually found in the intestines, it is commonly the only one that will survive a thorough treatment of the stool with a 5 or 10 per cent phenol solution.

My method of isolation was as follows: From 25 to 30 grams of solid feces were made into an emulsion with 50 cc of a 5 per cent solution of phenol and allowed to stand for thirty minutes or an hour; cultures were made on agar slants and incubated. I have never made such cultures from the stools of epileptics with the view of noting how numerous the organism is present, but in normal individuals, a loopful of the above emulsion spread over an agar slant will yield from one to six colonies after twenty-four hours of incubation.

The organism is highly hæmolytic, and



LEGEND.

*Bacillus epilepticus* directly in blood smear from an epileptic patient five hours after seizure.

to this last fact may be due a part of the pathological conditions present in epileptics. Cultures made on blood agar plates will show a hæmolytic spot at the point of a growing colony long before the colony itself becomes visible. In the case that came under my observation, I found it abundantly present in the capillaries, and both the spores and the organism could easily be demonstrated in smears from the blood directly.

#### CONCLUSION.

In view of the fact that the organism does enter the circulation and there multiplies into great numbers and is so generally found in the blood of epileptics, the conclusions of Reed as to its specific na-

\*Reed, Charles A. L.—*Journal of the American Med-*



ture become at least very plausible. It would be hard to conceive that an organism with such a high hæmolytic property could enter the circulation and multiply to such numbers as smear preparations from the blood indicate without producing diseased conditions within and resulting in corresponding clinical manifestations without.

At any rate, what has already been established in regard to the organism makes the question one most worthy of serious consideration and extensive investigation. The universal presence of the organism in the intestinal flora is no argument against its probable pathology, but simply adds to the importance of the gateway through which it enters the blood stream, in consideration of the question of treatment.

If further investigation should finally establish that the bacillus epilepticus is the exciting cause of the seizures of this disease, little probably can be hoped for in the way of prophylaxis or cure through efforts to prevent the organism from entering the intestinal tract or to eradicate it when present. The best attention probably will have to be directed toward those lesions which open the way for it from the intestines into the circulation.—New York Medical Journal.

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### Death Rates in the Registration Area of the United States in 1915.

WASHINGTON, September 19, 1916.—A preliminary statement just made public by Director Sam L. Rogers, of the Bureau of the Census, Department of Commerce, and prepared under the supervision of Mr. Richard C. Lappin, chief statistician for vital statistics, shows a death rate of 13.5—the lowest on record—per 1,000 estimated population of the registration area of the United States in 1915. This rate was based on 909,155 deaths returned from twenty-five states (in one of which, North Carolina, only municipalities of 1,000 population and over in 1910 were included), the District of Columbia, and forty-one cities in nonregistration states, the total population of this area in 1915 being esti-

mated at 67,337,000, or 67.1 per cent of the total estimated population of the United States.

There is a widespread and increasing interest throughout the country in respect to vital statistics. The states of North and South Carolina, which recently enacted the "model law" for the registration of births and deaths, were admitted to the death-registration area for 1916, increasing the estimated population of the area to 70.2 per cent of the total for the United States in that year.

### LOWERING OF DEATH RATES DURING DECADE.

The death rate for 1915, 13.5 per 1,000 population, is the lowest ever recorded, the most favorable year prior to 1915 having been 1914, for which the rate was 13.6. It is markedly lower than the average rate for the five-year period 1901 to 1905, which was 16.2. The decrease thus amounts to 16.7 per cent, or almost exactly one-sixth, during a little more than a decade. When due allowance is made for the addition of many new states to the registration area between 1905 and 1915, and the comparison is confined to the group of registration states as constituted during the period 1901-5—the present population of which is about one-fourth of the total for the country—there is still shown a very considerable decrease, from 15.9 to 14.3 per 1,000 population, or 10.1 per cent. This decrease, on the basis of the present population, would amount to 42,876 deaths. On the assumption that a corresponding reduction has taken place throughout the entire country, this would indicate a saving of approximately 170,000 lives in 1915 for the United States as a whole.

The annual report for 1915, to be issued later, will state that changes in the age and sex constitution of the population must be considered before the exact nature and extent of the lower general mortality can be understood. It is certain, however, that the great progress made during recent years in the sciences of medicine and sanitation, together with the widespread awakening of the people throughout the United States to the support of public health

authorities, has resulted in the saving annually of scores of thousands of lives that would have been lost under the conditions prevailing only a few years ago.

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### **Warning to Physicians.**

KANSAS CITY, MO., October 2, 1916.

A man giving the name of I. P. Hammond, about thirty years of age, dark complected, well built, formerly employed as an agent with the National Americans in Oklahoma, is traveling over the country victimizing physicians by contracting with them to act as local examiners, and collecting a few dollars from each on an application for insurance. Reports have come from Iowa, Kansas, and Oklahoma of these frauds, and this is to warn physicians that he is an imposter, has no authority to represent this association, and is wanted by the authorities in Tulsa, Oklahoma, Kansas City, Kansas, and Atchison, Kansas, for frauds committed in those places.

He has no authority from this association whatever, but on account of his former employment seems to be in possession of a quantity of our printed matter which enables him to carry out his deceptions.

NATIONAL AMERICANS,

George L. Berry, Nat'l President.

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### **Bismuth Paste.**

Emil G. Beck, Chicago (Journal A.M.A., July 1, 1916), has gathered the published statistics of the use of bismuth paste in the cure of suppurative sinuses and abscess cavities within the last ten years, and gives them in tabulated form, with the exception of 319 nose and throat cases, which he excludes from his present consideration. The series of 527 cases from a very wide range of authorities gives an average of 80.64 per cent of cures, with a minimum of 12.5 and a maximum of 100 per cent. Both the minimal and maximal averages occur with the smallest number of cases and might be considered less significant on that account. To ascertain the lack of uniformity shown, he has observed

and conferred with other surgeons in their clinics and come to the conclusion that faulty technic is the chief cause of failure to cure. A suppurating sinus is only a contracting abscess cavity and when the small abscesses lock themselves off they empty in different regions, thus explaining the multiplicity of openings. About 20 per cent of all cases of diagnosed rectal fistulas are only tuberculous sinuses resulting from spinal, hip joint or intrapelvic abscess, and Beck reports cases illustrating this fact. In using the bismuth method of treatment we have two advantages: It helps to avoid useless operations and gives results without operation. He describes his *modus operandi*, which consists of injecting a quantity of bismuth paste liquefied by heating in a water bath, and composed of bismuth subnitrate, 30 parts, and yellow petrolatum, 70 parts, into the opening of the sinus until one is reasonably certain that all ramifications are filled. It will rapidly thicken and remain in the sinuses, permitting one to take a roentgenogram. When a sinus is very long and tortuous, the paste should be injected in a liquid state, so that it will flow readily into every part of the tract. If there is more than one opening, the paste is liable to escape from the nearest one and thus miss the remaining channels. To avoid this technical error, the mouths of all the other sinuses should be compressed by an assistant, by placing the finger tips against these openings, so that the liquid will flow in other directions, filling up all channels of the sinuses. It is essential that every crevice should be filled at one injection; otherwise there will be a recurrence of suppuration. An example is given showing how a faulty technic made the physician miss the focus of infection. The common technical errors are insufficient mixing of the bismuth with the petrolatum so as to leave small lumps, insufficient heating, use of improper instruments, injecting with undue force and the most common error is incomplete filling of the complete sinus tract. Too frequent injections and not giving the paste sufficient



time to do the work and allowing the patient to dress the wound himself are also causes of failure. Complete directions as to the proper procedure including the preliminary roentgenization and bacteriologic examinations are also given.

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### **Desiccation Method in Ophthalmology.**

Details concerning the desiccation method in ophthalmology were published by W. L. Clark, Philadelphia, in the *Journal A. M. A.*, September 12, 1914, p. 925. In the present paper (*Jour. A. M. A.*, July 1, 1916) he emphasizes the points essential for a proper understanding of the application of ophthalmology. It is used to destroy certain congenital or new growths on the eye by employing heat obtained from a high frequency electric current capable of being accurately regulated. He uses a high speed static machine equipped with proper accessories for transforming the static into high frequency current. The growth treated on the conjunctiva is anesthetized by a 4 per cent cocain solution, and if on the lids by a 1 per cent solution of novocain and epinephrin. The current is tested to produce the desired thermic intensity, which is applied with an extremely fine steel needle set in a suitable insulated holder. The needle is usually just allowed to brush the growth, not to penetrate it. After the growth has been converted into a dry mass by the treatment, it is usually curetted away or excised, but sometimes is allowed to slough. A good cosmetic result follows the desiccation. Infection has not been observed and blood and lymph channels are sealed. It is not always necessary in epithelioma of the lids to desiccate quite all of the malignant tissue, as the heat penetration will cause this to disappear. Clark's experience with the method extends over seven years and he reports cases of epithelioma of lids, canthi and conjunctiva, though he includes in his analysis other lesions, malignant and benign. He sums up the advantages of the method as follows: "Desiccation is a successful treatment for localized basal cell epitheliomas of the lids and canthi, both

from a curative and a cosmetic standpoint. 2. In advanced epitheliomas of these regions when sinuses or orbit are involved, complete success is not certain because of the inaccessibility of the diseased tissue, and is applied for palliative reasons, when operation fails or is contraindicated. 3. The results thus far in round cell and melansarcoma of the lids and conjunctiva have been good, but a sufficient time has not elapsed in any case to determine ultimate results. 4. Success is assured in benign growths of the lids, such as angiomas, warts, moles, xanthoma and lupus erythematosus. 5. Desiccation may be used to advantage for the treatment of pterygium. 6. The method is valuable in the treatment of granular conjunctivitis and corneal ulcers. 7. Symblepharon usually does not follow desiccation. 8. There is no danger of applying the desiccation treatment to growths on the cornea, as it is under perfect control."

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### **Half a Century's Progress.**

October, 1916, points an epoch in the history of Parke, Davis & Co. The house was founded in 1866—just fifty years ago this month—largely upon the optimism of three or four determined men, backed by a capital that would seem insignificant today. There was nothing in its unpretentious origin to foretell the success of after years. And by success we mean not merely material prosperity, but also that broader and more enduring success that is based upon good will and confidence.

Manufacturing pharmacy was then a crude, imperfect art. Bacteriology, pharmacology and biological pharmacy were as yet unborn. There were no curative sera or vaccines in those days. Prophylaxis was in its infancy. Standardization was unknown.

Fifty years have wrought marvelous changes in means and methods for the treatment of human ills. The *materia medica* has been amplified beyond the dreams of the earlier investigators. Knowledge of pathology has immensely broadened. The empiricism of the past has given

way to rational therapeutics, and medicine is taking its rightful place among the sciences.

In all these forward movements Parke, Davis & Co. have had some part—notably as discoverers of new vegetable drugs, as inventors of new chemical compounds, as pathfinders and producers in the field of biological manufacture, as investigators in original research, as pioneers in both chemical and physiological standardization.

The past half century, as we have intimated, has been remarkable in its contributions to the newer *materia medica*. What will the next fifty years bring forward? Time alone can write the answer. Ours is a progressive age. The science of medicine has not reached its highest development. The physician's armamentarium will be further enlarged and fortified. New remedial agents will come into being. Many existing products will be improved. And with the fulfillment of these conditions, Parke, Davis & Co. (if we may judge the future by the past) are certain to be identified.

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### **Influenza Serobacterin Mulford for Immunization Against Colds.**

The usual method of treating acute and chronic respiratory catarrh (common colds) has proven unsatisfactory chiefly because it has not been generally realized that the disturbance is due to bacterial infection.

The respiratory passages are constantly exposed to inroads of bacteria. When the functions of the mucous membrane are in a weakened condition, the bacteria rapidly increase and cause the well known annoying and persistent chronic cold. Exposure to dampness, drafts, etc., also causes vasomotor disturbances which inhibit the protective functions and an attack of acute respiratory catarrh frequently results.

Spontaneous recovery is due to the formation of specific antibodies which overcome the bacteria. Treatment, therefore, should be based upon the principle

of heightened immunity. This is readily induced by the intelligent use of an appropriate bacterin.

Influenza Serobacterin Mixed Mulford—a combination of killed sensitized bacteria secured from a large number of cases of respiratory catarrh of various types—is useful in catarrhal conditions of the respiratory tract, both for treatment and prevention. It may be used either before a cold is fully developed—to abort it; during the height of a cold—to hasten recovery; or between attacks—for prevention.

The usual method of administering Serobacterins is to employ the four-syringe package when beginning treatment. From one-fifth to entire contents of Syringe A represents the usual initial dose, and is followed by B, C and D at intervals of twenty-four to forty-eight hours. When it is desired to again increase the patient's immunity, Syringe D may be administered (D-strength syringes are supplied separately for this purpose). In acute cases it is advisable to start with smaller doses.

Influenza Serobacterin Mixed Mulford is a refined product superior to the regular bacterial vaccines. It is very rapid in action, usually producing its immunizing effect in twenty-four to seventy-two hours.

Send for Educational Bulletin No. 2 entitled "The Bacteriology of Catarrh and Common Colds."

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The requirements of a special diet for diabetics has led to the addition of several new foods to the menu of the Battle Creek Sanitarium. Bean sticks are largely used. They are made from the Soya bean and contain no carbohydrates, while showing a high content of protein and fat. The root of the lotus, a water plant, and a species of lily also yield a food lacking carbohydrates, but the nutritive value is less than that of bean sticks. Bamboo shoots are also served, but they contain a small amount of carbohydrates.



### Propaganda for Reform.

The U. S. Pharmacopœia, IX.—The ninth revision of the U. S. Pharmacopœia became official September 1, 1916. It is a book of standards for drugs, but it is not a book of standard drugs. The pharmacopœia includes substances which have been shown to be inert like the hypophosphites, complex and absolute mixtures like the compound syrup of sarsaparilla, and drugs which have been tried and found wanting like saw palmetto berries. There is one great advantage in specifying U.S. P. preparations: to do so is to invoke legal standards of identity and purity. The only way to be sure of obtaining substances of therapeutic efficiency, however, is to exercise discrimination; the pharmacopœia is no guide to therapeutically valuable drugs. (Jour. A.M.A., Sept. 2, 1916, p. 750.)

The New National Formulary.—The National Formulary, fourth edition, becomes official September 1. It is published by the American Pharmaceutical Association. The preface says frankly, "The scope of the present National Formulary is the same as in previous issues, and is based on medical usage rather than on therapeutic ideals. The committee consists entirely of pharmacists, or of men with a pharmaceutical training, and it cannot presume either to judge therapeutic practice or follow any particular school of therapeutic practice. The question of the addition or deletion of any formula was judged on the basis of its use by physicians and its pharmaceutical soundness. The considerable use by physicians of any preparation was considered sufficient warrant for the inclusion of its formula in the book, and a negligible or diminishing use as justifying its exclusion." The National Formulary contains a large number of formulas for preparations which in the main are complex and superfluous. From the pharmacist's point of view, the book is a valuable one. Physicians who have a scientific training in the pharmacology of drugs will not want it; others will be better off without the temptations

offered by its many irrational formulas. (Jour. A.M.A., September 2, 1916, p. 764.)

The Hypophosphite Fallacy.—The Council on Pharmacy and Chemistry reports that the introduction of hypophosphites into medicine was due to an erroneous and now discarded theory as to the cause of tuberculosis and the properties of the hypophosphites. After a review of the literature and in view of experimental work the Council concludes that there is no warrant for the use of hypophosphites in medicine, unless it be to secure the calcium effect from calcium hypophosphite and the ammonium action of ammonium hypophosphite. The Council reviews the claims made for the following and declares them ineligible for New and Non-official Remedies: Fellows' Syrup of Hypophosphites, Fellows Medical Manufacturing Co.; Syrupus Roborans (syrup hypophosphites comp. with quinin, strychnin and manganese), Arthur Peter & Co.; Schlotterbeck's Solution Hypophosphites of Lime and Soda (liq. hypophosphitum, Schlotterbeck's), the Schlotterbeck & Foss Co.; Robinson's Hypophosphites, Robinson-Pettet Co.; Eupeptic Hypophosphites, Nelson, Baker & Co.; McArthur's Syrup of the Hypophosphites Comp. (lime and soda), the McArthur Hypophosphite Co. Though in general no therapeutic claims so far as the hypophosphites are concerned are made for the following, the Council held their use irrational and directed their omission from New and Nonofficial Remedies which now describes them: Borchardt's Malt Olive with Hypophosphites, Maltzyme with Hypophosphites, Maltine with Hypophosphites and Maltine with Olive Oil and Hypophosphites. (Jour. A. M.A., September 2, 1916, p. 760.)

Pulvoids Calcydates.—The Drug Products Co., Inc., New York, markets tablets under the name "Pulvoids Calcydates 5 gr." with claims as to composition which, though vague, suggest that the product is a mixture of calcium salicylate and strontium salicylate. The Council on Pharmacy and Chemistry found that there was no evidence that a mixture of the salicy-

lates of calcium and strontium is superior to sodium salicylate and declared Pulvoids Calcyates ineligible for New and Nonofficial Remedies because unwarranted therapeutic claims were made for the mixture; because the name does not describe the composition; and because the mixture is an unessential modification of an established remedy (sodium salicylate). (Jour. A.M.A., September 9, 1916, p. 827.)

**Secretogen.**—The Council on Pharmacy and Chemistry has reported that commercial secretin preparations examined (Secretogen and Duodenin) contained no secretin and also that secretin is inert when given by mouth. While practically admitting the correctness of the Council's findings, the manufacturer of Secretogen (the G. W. Carnwick Co.), in a letter to the Council sets forth the company's claims for secretogen on a new and altogether improbable basis. Since the arguments are purely speculative, the Council reaffirms its previous action declaring this preparation ineligible for New and Nonofficial Remedies. (Jour. A.M.A., September 9, 1916, p. 828.)

**Arsenobenzol and Diarsenol.**—The Council on Pharmacy and Chemistry reports that it found Arsenobenzol, made by the Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia, and Diarsenol made by the Synthetic Drug Company, Toronto, Canada, substantially identical with salvarsan in composition, and equal to salvarsan in therapeutic efficiency. The Council reports that these products have not been admitted to New and Nonofficial Remedies because there is a doubt as to the legality of their sale in the United States. But for this doubt as to their legal status, both products would be entirely eligible to N.N.R. (Jour. A.M.A., September 16, 1916, p. 879.)

**Sulfuryl Monal.**—According to the label these "pastilles" contain "sulfuryl (combined polysulphurets) which liberates nascent sulphuretted hydrogen." The A.M.A. Chemical Laboratory reports that the tablets had the taste of licorice extract, an odor of hydrogen sulphide and that a tab-

let liberated about 6 c.c. hydrogen sulphide. The Council on Pharmacy and Chemistry reports that sulphides are practically ignored in modern text books and declared Sulfuryl Monal ineligible for New and Nonofficial Remedies because unwarranted and dangerous therapeutic claims were made for it. (Jour. A.M.A., Sept. 16, 1916, p. 894.)

**Bi-Taride Tablets.**—These are dark brown tablets with a strong tarry odor, sold by the Germicidal Products Corporation, New York. The Council on Pharmacy and Chemistry reports that the preparation was found ineligible for New and Nonofficial Remedies because the composition of the tablets is essentially secret, because the therapeutic claims made are exaggerated and an invitation to the public to depend on them in serious diseases and that the combination of coal tar derivatives and boric acid (said to be constituents of the tablets) is irrational. (Jour. A.M.A., Sept. 16, 1916, p. 895.)

**Glyco-Thymoline and Poliomyelitis.**—The manufacturers of Glyco-Thymoline are circularizing physicians, advising dependence on Glyco-Thymoline as a preventive against poliomyelitis. A report of the Council on Pharmacy and Chemistry pointed out that this preparation is simply a weak antiseptic, so feeble that even in full strength it does not kill staphylococcus aureus in four hours and is of little, if any, greater therapeutic value than sterile salt solution. (Jour. A.M.A., Sept. 16, 1916, p. 895.)

**Naphthalene for Automobiles.**—The A. M.A. Chemical Laboratory reports that "Inajiffi" tablets are pure, or nearly pure naphthalene. The tablets are to be added to gasoline for automobiles, etc. The increase of energy produced by the addition of the tablets is probably too slight to be appreciable. Even the addition of the small quantity advised by the dealers of "Inajiffi" did give an appreciable augmentation of energy, naphthalene might be bought in the form of moth balls. (Jour. A.M.A., Sept. 16, 1916, p. 897.)

**Mark White Goiter Treatment.**—The



Council on Pharmacy and Chemistry reports that Mark White Goiter Serum and Mark White Iodinized Oil, submitted by the Mark White Goiter Serum Laboratories, Chicago, was not admitted to New and Nonofficial Remedies because the sale in interstate commerce of the "serum" has not been authorized by the Treasury Department, because the statements regarding composition are indefinite and contradictory, because the therapeutic claims were not substantiated and because the routine treatment of goiter is irrational. Mark White is a veterinarian and, in association with various physicians, has exploited his treatment, at one time called "Goiterine," from different cities. In Chicago he has been associated with Dr. Rachel Watkins. (Jour. A.M.A., Sept. 23, 1916, p. 967.)

**The Therapeutic Value of the Glycerophosphates.**—In view of the very convincing evidence that the glycerophosphates do not possess the therapeutic properties attributed to them and are not superior to ordinary phosphates, the Council on Pharmacy and Chemistry examined the following proprietary glycerophosphate preparations: Tonols (Schering & Glatz), comprising iron, lime, lithium, magnesium, manganese, potassium, quinine, sodium and strychnine "tonols"; Duotonal Tablets, Triotonal Tablets, Quartonol Tablets, Sextonol Tablets, Phosphorcin Compound (Eimer & Amend); Robinol (John Wyeth & Bro.); Phosphoglycerate of Lime (Fougera & Co.); Elixir Glycerophosphates, Nux Vomica and Damiana (Sharp & Dohme). The Council reports that unwarranted therapeutic claims are made for all of these preparations. In addition the composition of Robinol and Elixir Glycerophosphate, Nux Vomica and Damiana is semi-secret, and Tonols, Phosphorcin Compound and Robinol bear objectionable names. (Jour. A.M.A., Sept. 30, 1916, p. 1033.)

**Kora-Konia.**—Kora-Konia is a dusting powder advertised to the medical profession by the "House of Mennen." It is claimed to be indicated in the treatment

of acne, dermatitis, eczema, intertrigo, and is said to possess germicidal qualities. The A.M.A. Chemical Laboratory reported that the powder essentially consists of talcum and zinc stearate in about equal proportions to which small quantities of magnesium carbonate and boric acid have been added. The Council on Pharmacy and Chemistry believes that the extravagant and unwarranted therapeutic claims made for this simple dusting powder are likely to lead the public, as well as the thoughtless physician, to place unwarranted confidence in it and therefore declared Kora-Konia ineligible for New and Nonofficial Remedies. (Jour. A.M.A., Sept. 30, 1916, p. 1034.)

—————R—————

### **New and Nonofficial Remedies.**

**Solution of Hypophysis-Squibb.**—A sterilized, aqueous solution of the water-soluble active principles of the posterior lobe of the pituitary bodies of cattle, free from chemical preservatives and physiologically standardized. It has the properties of the pituitary gland, as described in New and Nonofficial Remedies, 1916. E. R. Squibb and Sons, New York. (Jour. A.M.A., Sept. 2, 1916, p. 745.)

**Benzidine.**—In medical practice benzidine is used for the detection of occult blood. In the presence of Hydrogen peroxid and acetic acid, benzidine is changed to a deep purple compound by the action of blood. The test is said to detect blood in a dilution of 1 in 300,000.

**Benzidine-Merck (For Blood Test).**—This complies with the standards prescribed for benzidine, N.N.R., Merck and Co., New York. (Jour. A. M. A., Sept. 6, 1916, p. 879.)

**Occult Blood Test (Dudley Roberts).**—This consists of tablets each containing 5 grains of a trituration of benzidine, 1 part, and sodium perborate, 20 parts, and glacial acetic acid (supplied in boxes containing 100 tablets in vials, and a bottle of glacial acetic acid). A tablet is treated with a weak solution of the material to be tested and a drop of acetic acid added, a greenish blue color indicates the presence of blood.

E. R. Squibb and Sons, New York. (Jour. A. M. A., Sept. 16, 1916, p. 879.)

**Mercurial Oil.**—A mixture containing from 40 to 50 per cent of metallic mercury in an oily base. The mercury is in a finely divided state and of a consistence which permits its intramuscular injection by means of a proper syringe at room temperature. The degree of subdivision of the mercury should be indicated for each brand of this product. Mercurial oil is used as a means of obtaining the systemic effects of mercury. Cumulative effects should be carefully watched for.

**Mercurial Oil-National Pathological Laboratory.**—A mixture of equal weights of mercury and lanolin obtained by triturating the constituents until mercury globules are no longer microscopically visible. It is marketed in graduated syringes ready for use and containing 2 Cc. National Pathological Laboratories, Chicago. (Jour. A. M. A., Sept. 23, 1916, p. 953.)

**Liquid Petrolatum-Squibb, Heavy (California).**—It is made from California Petroleum and is claimed to be composed chiefly of hydrocarbons of the naphthene series. A brand of liquid petrolatum complying with the U. S. P. standards for liquid petrolatum and claimed to be superior to liquid petrolatum, U. S. P. E. R. Squibb and Sons, New York. (Jour. A. M. A., Sept. 23, 1916, p. 953.)

**Thromboplastin-Squibb.**—A solution of brain extract complying with the standards for solution brain extract, N. N. R. It is marketed in 20 Cc. vials. E. R. Squibb and Sons, New York. (Jour. A. M. A., Sept. 13, 1916, p. 953.)

**Chlorazene.**—Chlorazene (sodium paratoluenesulphochloramine) is an active germicide acting much like hypochlorites, but being less irritating. Like the hypochlorites it has the advantage over mercuric chloride, zinc chloride, etc., in that it does not coagulate or precipitate proteins, such as blood serum. Chlorazene is reported to be practically non-toxic. The Abbott Laboratories, Chicago, Ill. (Jour. A. M. A., Sept. 30, 1916, p. 1021.)

When you have soiled your hands, working around your car, whether on the road or at home, try ordinary lubricating oil for cleansing purposes. Rub it on freely, particularly about the finger nails and on all dirty spots, then rub it off carefully with a cloth. The hands will be clean and soft and can then be washed with soap and water to remove the oil.

—R—

Assuming that women have the moral right, and that the legal right be given them, to limit the number of their offspring as they see fit, and that for this purpose there be no restrictions upon the knowledge or the use of the contraceptive methods, how would it affect the number of transgressions from the paths of virtue?

How many of us do right because it is right rather than because of the fear of the consequences of doing wrong?

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### Differentiation in Mental Cases.

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Read at October 1916, meeting Shawnee County Medical Society.

The medical examiner called to a case in which the question of mental unsoundness is involved should determine first, whether the conditions present are due to an exciting cause, acting temporarily, or whether there is a history of departures from the normal in mental operations extending over a period of weeks or months. Obviously, painstaking inquiry into the history and antecedents of the patient is a logical means to the end, but it is, nevertheless, necessary to be guarded and not to depend over-much upon revelations at the bedside. For example, a patient is found in delirium; he has fever, a flushed face, and rapid pulse. There is to be considered the possibility of a typhoid condition, of pneumonia, or of any malady of infection. Are the symptoms wholly or mainly due to circulation in the blood of poisonous materials; is the condition to be regarded an expression of mental weakness, an episode in the progress of a psychosis, or is there an infection acting as a trauma upon a susceptible organization, and producing undue reaction? It is well known that the nervously unstable succumbs to deleterious influences from without (exogenous) more readily than one whose nervous organization is well balanced and whose mental reflexes are of a less superficial and explosive character. In any case, too much stress may be laid by those in attendance upon that which is trivial and unimpor-

tant in determining etiologic values.

Having been able through inquiry to eliminate dependence of the present condition upon a former attack of mental disease, or upon constitutional nervous instability, the provocative causes of delirium heretofore mentioned are to be duly considered and searching examination made to determine the basis of the morbid mental operations.

Insanity may be imperfectly defined as "a prolonged departure from the individual's normal standard of thinking, feeling, and acting," and it may be revealed through states of excitement, of depression, of mental weakness, or a combination of these. States of morbid excitement occur in the delirium of fevers, hysteria, alcoholic intoxication, manic depressive insanity, dementia præcox; episodally in epilepsy, in paretic dementia, in senile and in involutional mental impairment. They also occur, though rarely, in paranoia and in paranoid forms of disease other than true paranoia.

Morbid mental depression occurs in hysteria, after prolonged alcoholic indulgence, in morphine habituation, in manic depressive insanity, in dementia præcox, in organic brain disease, in involutional states, occasionally in paretic dementia, and is an outstanding symptom of syphilophobia.

Dementia, that is to say acquired weakness of the mental operations, occurs in dementia præcox, in paretic dementia (general paralysis of the insane) in senile states, in organic brain disease. It will be observed that here no account is taken of congenital mental defect — imbecility.

This is also a weakness of mind, but a weakness entirely dependent upon prenatal causes, or arrested development in early life.

Simple febrile delirium may usually be distinguished from that attending manic-depressive conditions by the high degree of fever present, the flightiness and restlessness, the insomnia, illusions and hallucinations, increased sensitiveness to sound and touch and light, a sensitiveness augmenting with the degree of fever and the seriousness of the debilitating process. There are, however, exhaustive psychoses due to such causes as difficult childbirth, prolonged lactation and excessive mental strain, especially when coupled with alcoholic indulgence where there are developed considerable fever, flushed face, dry mouth, sordes on the teeth, suffused eyes, wandering speech, extreme debility. Similarly, in certain manic-depressive conditions, in the manic phase, excitement may proceed to an intense degree, involving sleeplessness, refusal of food, and progressive exhaustion. Under old classifications there was designation of such cases as acute exhaustive mania. In my experience, they have been of late years relatively rare, a fact due to improved methods of treatment, hydrotherapy, more careful attention to feeding, the promotion of elimination through high enemata and other methods, and the refreshment of the blood by the use of saline solution.

The phenomena of alcoholic delirium are sufficiently familiar, the illusions of touch and the peculiar hallucinations of sight furnishing, as a rule, dependable diagnostic signs. It should not be forgotten, however, that in not a few cases the examiner may have to deal with alcoholic poisoning acting upon a nervous organization previously unstable: indeed, prolonged indulgence in alcoholic stimulants and consequent delirium may be the first signs of the appearance of the excited phase of manic-depressive insanity.

The diagnosis between manic-depressive and dementia præcox is often difficult. The leading features which distinguish the

latter condition are the apparently purposeless character of excitement, the shifting emotional states from exaltation to depression, the mannerisms, the posing, the attitudinizing, the evident hallucinations of hearing or sight or touch, or sensory illusions (currents of air or electricity). There may be misinterpretation of sensations in the mouth, abdomen, or pelvis (hallucinatory or illusional) leading to the belief that the bowels are gone, that an "itting machine" operates on the body, that men violate the patient's person or compel her to submit to degrading experiences. There are delusions persecutory, fantastic, or grandiose, not systematized but in the paranoid form persisting under practically the same form of expressions—as that others acquire health and comeliness through food and treatment administered to the patient. Sexual crises may occur. These are not rarely associated with religious ecstasy or katatonic manifestations as the assumption of the position of Christ on the cross. There is apt to be verbigeration or echolalia, that is to say, the repetition over and over of the same word or words of similar sound. There may be senseless rhyming, untidiness, mutism, and negativism, the last three symptoms being closely allied. Negativism is the doing of things in a directly opposite fashion from that which is suggested. It is not opposition merely, but goes further than this. On the suggestion that an extremity be relaxed, it springs into extreme rigidity. Attempts to clothe the patient are not only opposed, but there is insistence upon getting into garments wrong side before. Efforts to undress him determine his gripping the sleeves of his coat. Attempts to open the eyes are resisted and if resistance is unsuccessful, the eyeballs are rolled up to such a degree that noting the condition of the pupils is impossible. Negativism is also a factor in untidiness and represents the disposition of the patient to do exactly the reverse of that which is desirable. There may be pronounced stercophilia, the individual revelling in the excretions of



his own body, the money complex—that is, the association of money with fecal dejecta—being present in some cases.

In the excitement of manic-depressive states, there is the expression of one immature idea after another, but there is a certain dependence, a word for example bringing to the patient's mind another symbol which requires for its expression quite a different formula. This is the so-called flight of ideas. There is rarely the disposition to verbigeration or to stereotypy. In manic depressive conditions, also, there is much self-sufficiency and self-glorification. There are ambitions and impracticable schemes and exaggerated self-importance, but rarely fixed delusional expression in any particular direction. There is rapid change from one extravagant utterance to another. There is pressure of activity. The patient feels himself alike facile in machinery, in art, in architecture, in matters military. Either of these may be a dominating note, but in conversation with him one can hardly escape the feeling that he does not take his own delusional expression, if it may be properly so-called, altogether seriously. He is loquacious and quarrelsome, faultfinding and exacting. His outgivings are punctuated with mysterious gestures, winks, and signs, he takes his auditor to one side and informs him that he is a Pinkerton detective. on the lookout for evildoers, he writes voluminously and extravagantly, but with lack of sequence. There is apt to be gaudy and fantastic dress. He places feathers in the hat, bright colored strings or tobacco tags in button holes. Emotional states are mixed and there is frequently considerable insight as revealed through close questioning, or when it is directly indicated to the patient that present outgivings are not in conformity with his previous walk and conversation. As the wife of a patient said to me in reference to her husband's judgment of his own condition, "He knows it but he knows it in such a funny way." Hereditary tendency is strong in manic-depressive states.

The excitement of paretic dementia

(general paresis, general paralysis of the insane) is as a rule brief, is confused and frequently furious. It may be related to the necessary verbal opposition placed in the way of the patient carrying out plans and enterprises or to the physical restraint upon his conduct. It is rarely the first indication of mental breakdown, earlier signs being grandiose delusions, motor involvement, as of speech, gait and handwriting (incoordination), pupillary phenomena (dilatation, inequality or Argyll Robertson—accommodation to distance but not to light). In other cases, a period of extreme depression and aggravated neurasthenia has been the condition precedent. Now and then in such a case there is an extravagance in the very depression, comparable with that vastly more frequently manifested in delusions of great personal prowess, riches, and omnipotence. In paretic dementia, a positive Wassermann reaction is of incalculable diagnostic importance, syphilis being, in the opinion of present-day observers, a *sine qua non* to the development of the disease.

Syphilophobia based upon actual recognition of infection or founded upon suspicion of infection, often leads to excitement approximating or equalling frenzy. Manic-depressive cases occasionally display this symptom. The fear of syphilis is a convenient peg upon which to hang bad feeling. Involutional melancholia, that is to say, melancholia occurring at or near the climacteric period of life and due to nervous changes incident thereto, is occasionally attended by extreme restlessness and agitation, the result of this fear. In such cases as in those of syphilophobia well based, the frenzy of the patient may impel to suicide. I have had a recent very pronounced experience with the latter condition where a fatal termination was averted only by the most energetic medicinal measures.

The excitement of hysteria, the opisthotonos, the flushings, the exaggerated reflexes, the causeless vomiting and the bizarre conduct will usually reveal the true situation, but too great emphasis can

scarcely be laid upon a mistake made occasionally by thoroughly expert men, that of regarding as purely hysterical, the episodal hysteric phenomena accompanying organic brain disease. I have in mind two patients suffering from brain tumor in which hysteria was a complicating factor. The very first motor symptom which one of these displayed was dragging of the foot after visiting a friend who had paralysis. In view of the emotional factor, subsequent motor involvement which in the end was revealed as unmistakably due to brain tumor was discounted and regarded as due to lack of voluntary control. In another case, prattling, confused utterance and a state of dream consciousness for some weeks antedated somatic signs.

In many epileptic cases of long standing, attacks of excitement occur. These are brief, unreasoning, furious. They are apt to appear at the end of a period of relative freedom from seizures as when these have been restrained through the use of bromides and other sedatives. In other cases they accompany the status epilepticus and in still others terminate in this condition, convulsions occurring in rapid succession over a period of twenty-four to forty-eight hours. During the progress of attacks of epileptic excitement, the patient is extremely dangerous to others. Visual impressions arouse the reflex to strike and attempts to control are met with resistance and belligerency. In epileptiform attacks of paretic dementia, there is, on the contrary, rarely any degree of danger to others. These are not often attended by irritability. Indeed, a pleasurable emotional attitude is the rule in every stage of paretic dementia, but danger to others from the conduct of the patient is by no means negligible. I have known one paretic at least who was deliberately, systematically, and invariably homicidal, and not a few with more or less insight into the condition present who were suicidal. The epileptiform seizure of paretic dementia, however, is not accompanied by excitement, as is so often

the case with true epilepsy.

Excitement in involutional melancholia is infrequent and episodal. It is based upon painful delusions, the sense of worthlessness and despair, and is related to frenzy. Emotional states are invariably painful. Excitement in senile dementia is of a puttering and extremely confused character and the degree of dementia which accompanies the condition renders response to suggestion impossible. Debility and confusion lead to falls, injuries and accidents of various kinds, muscular action in these states being often purely automatic.

Turning now to the opposite condition, there is morbid mental depression in the "next day" feeling of one who has tarried too long at the bar or the banquet table. This is the familiar R. E. Morse, but neither this nor the depression attended by neuralgic pains in the extremities and extreme physical prostration, incident to the withdrawal or morphine, need occupy serious attention in this paper.

Passing on to hysteria, neurasthenia, and hypochondriasis, closely allied conditions, there are found self-centering, reference of painful impressions to internal organs, hopelessness, vaso-motor disturbance, prostration and in the first on the list, namely hysteria, anesthetics, paresthesias, and contractures. The discovery of a sexual trauma, that is to say, an experience accompanied by mental shock and its revelation through psychoanalytic methods will often clear away pronounced hysteria. I was called several years ago to the country to see a young girl who had recently returned from boarding school. She was the picture of physical health but had complained much of pain in the pelvic region, had been sleepless and through screaming had prevented sleep on the part of anybody else in the house. Resort had been had to morphine and she had begun to clamor for what a patient once called "hypodevils" at frequent intervals. The house was filled with anxious relatives and neighbors and things were, generally speaking, at sixes and sevens. It was some



time before I could get the young girl's attention. It was finally elicited that she had been interested in a young man, had walked with him at night in the park, had undergone through this association much sexual stimulation and was suffering in the emotional sphere through separation from his companionship. After gaining this information given disjointedly, but which made a story when pieced, I spoke to her with great seriousness, saying that she was not suffering from pain in the pelvis at all, that she was translating quite different sensations there as pain, that the call for morphine was unnecessary, that she was wasting herself in giving way to such impulses, that by and by the habit of loss of self-control would become fixed and that then realization of any reasonable matrimonial aspirations which she might have would be impossible. She listened at first languidly, then interestedly, then altogether seriously. It was worth while to see the change in the facial expression as the psychology improved. "Am I right?" I asked after the exposition of the case was completed. "Yes," she replied with great frankness, "but don't tell mother." This I naturally promised on the spot, the only condition being that she should gradually cease outbursts of noisy excitement and withhold all call for morphine. The condition was accepted and improvement under the use of eliminatives and well directed nursing attention, quickly occurred. Within a few days she was to outward seeming, well.

In sexual neurasthenia, the impression of impotence with self-pity based thereupon may come to light through careful investigation of the patient's emotions, springs of action, and habits of thinking. Confiding is in itself productive of good and I have found it vastly helpful in certain cases to minimize the importance of the function in question. Bewailing lessening of activities in this line on the part of one in the fifties has an amusing side, although tragic to the patient himself. As to similar notions among those in adolescent years, a thorough unbosoming on the

part of the patient as to the detail of ineptitude may point the way to relief for what is as a rule purely an emotional state, springing from timidity or self-scrutiny.

Sudden loss of voice on the part of a public speaker may be the occasion of great distress to him, while practically of small importance. I have been consulted several times by a minister who conceived himself in danger of breaking down completely in this regard, in the pulpit. He had never actually succumbed, but trepidation over what might happen was consuming him. Competent laryngologist after laryngologist, and neurologist after neurologist had been consulted and among them there was never the slightest difference of opinion that the difficulty was purely emotional. He had been given all sorts of advice for the condition, vocal gymnastics and complete rest, a sojourn in the country, a change of vocation, this, that and the other suggestion which might occur to the beleaguered mind of the medical examiner. It occurred to me after the third or fourth interview to vouchsafe the only bit of advice which I believed he had not received, that is to say, to ignore the state altogether, to fulfil his duties as well as he could, to go into the pulpit not caring whether there was or was not weakness of the voice. "Supposing you fail altogether and require to leave the pulpit, what of it? Explanation can be made later and the whole thing will be overlooked by your parishioners." Not having heard from him since this advice was given many months ago, I have an idea that improvement in self-confidence through the inculcation of the "Don't give a ——" attitude occurred.

In the depression of manic-depressive insanity, concepts are of a painful character and impressions of a distressing nature put a check upon conduct. Every grade of depression is encountered, from the feeling of gloom and despondency without delusions to depression with agitation and a feeling of despair and unworthiness. The patient has a disposition

to shun other people and to avoid effort, is self-disparaging and self-accusatory, is indifferent to exercise and does not carry tasks to completion. There is the feeling of sinfulness and the patient may seek consolation in religious exercises. Possibly the delusion of the unpardonable sin may appear. One speaking of the emotional state said, "It was with inward horror that I sank into the abyss and confronted the inevitable. I knew it with a certainty and positiveness compared with which the axioms of mathematics are the vaguest rumors and hearsay." This hyperbolic form of expression is interesting.

In another class of cases delusions based upon some experience in earlier life fill the patient's entire mental horizon and determine conversation. Accusatory, threatening, and disparaging voices are heard. It is often difficult to distinguish between the illusory and the hallucinatory, but it is my belief that here impressions are for the most part if not altogether of the former type. Closely questioned, the patient will be found misinterpreting current sounds, as the whistling of locomotives, the songs of birds, distant conversations on matters having no relation whatever to him. One patient under my observation was much distressed by contemptuous and threatening utterances to the effect that he had had perverted sexual relations with a negress and that therefore himself and his family were disgraced, would be denounced, maimed, subjected to all sorts of indignities. The complex which determined the illusion and delusion was the humiliating recollection of an actual cohabitation which, however, he insisted in replying to the voices and in self-justification, to have never exceeded the limitations of the physiologic and usual.

Patients experiencing the feeling of deep gloom may be carried over into that which is greater by the injudicious talk of friends as to the spiritual condition or by the babble of faith curers and Eddyites. In the melancholic phase of the alternating type of manic-depressive insanity, the patient lacks energy and application, is indifferent

to exercise, and inclined to remain in bed. He is frequently remorseful for unpleasant acts done during excitement and in proportion to the gravity of the antecedent excitement will be found the extent of depression, the pendulum swinging from one extreme to the other.

The depression of dementia præcox is attended by mutism, negativism, stuporous states, apparent blunting of perception. I say *apparent* blunting, having often noted that once out of depression, the patient realizes the incidents of it, has not missed a word that has been said in his presence during its progress, and has a complete diary of events occurring during an outwardly non-receptive and non-responsive state. Stereotypy, the disposition to do certain muscular acts in definite ways, and negativism are much in evidence. Hallucinations are present, particularly those of hearing, and it is held by not a few that their occurrence is of crucial significance in differentiating dementia præcox from manic-depressive insanity. Certain it is that they are vastly more common.

Depression occurring in organic brain disease, as brain tumor, is mainly of the apathetic type, is attended by somnolence and headache; perhaps, but not frequently, more or less bewilderment, and indifference to surroundings. Reference has already been made to the danger of confounding brain tumor with hysteria.

Depression is rare in parietic dementia. When occurring it may have the quality of indifference, or dullness, or it may be of an extreme degree, that is to say, extravagant. This latter manifestation occurs in the rare cases of parietic dementia where there is insight. I have known a patient of this kind to watch his progress from week to week and to inquire, after epileptiform seizures, as to the significance of the obliteration of consciousness. The suicidal impulse was in this case very strong and this may be also true of syphilophobia based upon the more or less correct understanding which the patient has of the relation of the causative factor to



certain emotional and intellectual phenomena.

Dementia, that is to say, acquired feebleness of mind as opposed to congenital feebleness (imbecility) is found in dementia præcox of long standing, although in certain types the degree of involvement of the faculty of memory is inconsiderable. Furthermore, reasoning and judgment upon matters purely impersonal may be momentarily fairly clear, but the range is limited. Deterioration may be so slow in appearance as to be with difficulty determined. In true paranoia, the dementing process is singularly enough not conspicuous, notwithstanding the fact that fixed delusions practically unvarying in expression and more or less influencing conduct may have been present for many years. This absence of tendency to diminution of the capacity for work, the absence of deterioration in judgment as to impersonal matters, often serves a most useful purpose in differentiating true paranoia from certain paranoid forms so-called, and from the paranoid type of dementia præcox.

Deterioration in judgment, in reasoning, in memory, and in emotional response is a continuous performance and more or less rapid in general paresis and in the organic forms of brain disease. It slowly occurs in epileptic states.

To recapitulate as to certain mental states with more or less difficulty differentiable:

#### *Fever Delirium.*

Follows closely the clinical course of fever.

Varies in degree with the intensity of toxemia.

There is clouding of consciousness in all but the lightest grades.

There are dreamy confusion of thought, illusions and hallucinations, insomnia and motor restlessness.

Its duration is limited corresponding to the course of the fever.

#### *Dementia Præcox.*

Incidence — at or near the pubescent period.

Not infrequently is apparently determined by an exogenous cause, as typhoid fever.

It is characterized by more or less pronounced tendency to mental deterioration.

There is good orientation except in stupor and states of anxiety.

Hallucinations of hearing, sight, or touch may be present.

There is blunting of voluntary attention.

There is memory defect, but at times more apparent than real.

There are loose and desultory train of thoughts and faulty judgment.

Delusions are of different forms, persecutory, depressive and expansive. They are as a rule unsystematized.

Emotional deterioration and gradual loss of the ethical sense occur.

There is lack of voluntary activity.

Sexual crises are common.

The emotions are of a shifting character.

Three forms are recognized:

a. Hebephrenic: Simple mental deterioration, gradual in development, and associated with disturbance in the sexual sphere.

b. Katatonic: Characterized by stuporous states with negativism and muscular tension. Excited states with impulsiveness, stereotypy, verbigeration, echolalia, and mannerisms.

c. Paranoid: In contrast with the transitory delusions of the other two forms, this is characterized by persistence of persecutory and expansive delusions. They are variegated and fantastic and those of somatic origin are prominent. They are not, strictly speaking, systematized, thus differing from those of true paranoia; they are accompanied by many hallucinations, especially of hearing.

#### *Manic-Depressive.*

In manic-depressive insanity there is apt to be defective heredity. The disease is characterized by recurrence of manic, depressive or mixed symptoms at intervals throughout the life of the individual. It does not lead to deterioration.

Manic phase: Psychomotor acceleration; pressure of activity; flight of ideas;

irritability; distractibility; loquacity; unstable emotional states; tendency to fantastic attire; hallucinations rare.

Depressed phase: Psychomotor retardation; lack of voluntary activity; paucity of ideas; emotional depression.

Delusional forms: There may be self-accusatory delusions—those of suspicion, apprehension, fear, with or without clouding of consciousness. Auditory illusions based upon complexes often accompany these.

Paranoia is a chronic progressive malady. It is characterized by gradual development of progressive, stable systematized delusions.

Paranoiacs show one-sided mental development; are usually bright in some field of mental activity. Delusions are persecutory, then expansive and show a transformation stage from one to the other; all are persistent. They are coherent and logical in development through retrospective falsification of memory.

Hallucinations are not important, but are usually present at some period of the disease. There are misinterpretations of sounds—auditory illusions—and impulsive conduct based thereupon. *Emotional attitude stands in direct relation to the activity and character of delusions.*

Volitional control may be overwhelmed by the strength of delusions leading to violence and homicide. Threats are frequently made.

### *Hysteria.*

A neurosis in which mental states produce physical symptoms. The symptoms are numerous and are produced with great facility. There is often hereditary basis. It is more frequent in women.

Disturbance is most pronounced in the emotional field.

There are hypochondriacal ideas and complaints of physical ailments arising from emotional depression; there is exaggerated self-consciousness.

In the volitional field there is apparent wilfulness, or on the other hand, paralysis of the will; there is unstable and erratic conduct. The physical symptoms are le-

gion: Paralysis, contractures, choreiform movements, convulsions, sensory disturbances, globus, clonus, fainting, etc. These do not conform to anatomic and physiologic rules but are governed by psychic influences as to appearance, course, and disappearance. There may be various transitory states, as of mental fog, characterized by clouding of consciousness, occurring in connection with convulsions and which may be followed by hysteric lethargy or accompanied by silly excitement.

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### **Chemistry as the Essential of Medicine.**

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It is not the purpose of this paper to enter into a didactic discussion on the chemical elements of our physical existence, for even an attempt at that would be manifestly embarrassing to the essayist in the presence of those eminently conversant with the details of this technical branch. I desire only to discuss it from the viewpoint of a lay-practitioner, observing the weaknesses and needs of his profession.

In student days one often listened to the expressions, "Just learn enough chemistry to pass the board," or "You can't use chemistry in practice." In conversation with busy practitioners one hears these remarks, flavored with a sneer, "Chemistry is for specialists," or "It won't work out in practice as it does in the test-tube."

All this is true to the man who merely tries to "get by" in his profession. However, one viewing the matter seriously will note in an average given disease, treated by cult or physician, the results attained will approximate the same. The cult treatment may vary from osteopathy to any of the religious credulities. The physician's treatment may run the therapeutic scale of suggested remedies, each claiming its quotas of cures. Under these conflicting conditions it is manifestly apparent that nature's own attempts, boosted by the suggestion from the healer's effort, is alone responsible for the relief.



In reaching this conclusion we must be understood to exclude surgery, symptomatic medication, a few proven specifics and those modern agents elevated to efficiency through the efforts of our best biologic chemists.

Even in the most intractable cases nature's inclination is to resume the normal equilibrium, which it frequently does to the adverse prognosis and chagrin of the most learned pathologist.

This becomes a large asset to the patent medicine faker, quack or drugless cult. The uneducated physician, who knows not his limitations and whose chief stock in trade is self-assertiveness, depends upon it totally for results. In the eyes of many people they are frequently placed upon a par in knowledge with him who possesses the best that science can give.

At present we recognize disease on the basis that all bodies attacked are identical. We know there are variations of disease and we satisfy ourselves by terming those as atypical courses. We have not yet recognized that these atypical courses are due to variations of individual body chemistry.

We take a given food into the stomach; it is spoken of as agreeing or disagreeing, as the case may be. The stomach specialist frequently finds the cause and sometimes fails. Such results are to be expected on account of the chemical variations of the ferments, microbes and their products, mixing with the food and coming in contact with the already sensitized body cells of the stomach wall. The acid mixture of the stomach is poured into the intestines, where it becomes alkaline in reaction. Here its chemical constituency must vary at frequent intervals of its passage and perhaps never is identical one day with another.

Bacterial diseases appear to be physical in their nature but are exclusively chemical. To be susceptible to a disease, the cell elements of a body must possess an affinity for the elements of the germ cell, to the degree of sustaining a rearrangement of their elements, thereby producing substances analogous to salts in the inor-

ganic world. These are soluble and usually highly toxic.

In diabetes, a disease in which certain metabolic processes are apparently accentuated, the end-products would appear to result from the action of a body similar in character to an enzyme. So far as chemists are able to determine, glucose is composed of the same combination as muscle sugar and only a molecule or two of water removed from many other carbohydrates. Perhaps the ever-willing enzyme accepts the exchange of this molecule which gives the result.

In nephritis, where the breaking up of the nitrogen content is not complete, the necessary oxidizing body may not be present. Whatever the mode of operation an interesting chemical process is carried on. It is yet unknown whether primary anemia is a destructive process or one of failure to manufacture the red cells. If the former, the action is a cytolytic one and induced by the introduction of an oxidizing body capable of combining with and breaking down the cell. If the latter, the manufacturing organ lacks the elements to complete the cycle of the compound necessary to make up the cell.

It is with this complicated medley of chemical gymnastics in digestion, metabolism and disease, that the physician has to deal in treating the sick, and yet it is handled with such utter indifference. Our scientists are striving hard to unravel the knotty problems, while a majority of our physicians are utterly oblivious to the gravity of their work.

Into the alimentary tract, with its manifold chemical combinations, we are pouring our acids, alkalies and salts, frequently without heed as to their ultimate fate. Likewise it is the dumping ground of that vast horde of chemical unknowns which we please to call extracts and tinctures. Each will differ chemically, at least to a slight degree, even when derived from the same plant. Then, to modify the taste of these already complicated mixtures, elixirs and syrups are added to compound the felony.

Compound tablets and beautiful elixirs are prescribed for the sick because a pharmaceutical chemist recommends them, or a text book makes mention of the same. The patient recovers and our admiring friends herald the wonderful feat. This needs only to be repeated a few times till we commence to take it real seriously and believe it ourselves, when truly the patient recovered in spite of medicine and disease.

How easy it is today to dispense drugs, when the pharmaceutical house diagnoses and prescribes. These drugs are not all totally useless, but instead some will get by, reach their intended destination and be of some service. Such accidental results we love to call scientific, when it is very poor practice. Very few drugs can run the gamut of the alimentary tract without meeting up with an affinity, forming a partnership, getting a divorce and becoming completely changed in their nature.

Sufficient interest is yet unawakened in the so-called organic chemistry, and our knowledge of it is quite vague. We must keep in mind that every substance, from a mess of peas to a dose of cod-liver oil, on entering the body, whether appropriated as a food or absorbed as a therapeutic measure, must do so by chemical combination. Substances when taken into the alimentary tract are positively inert in given individuals at intervals and pass as residue, while in other instances they meet with other substances which throw them into immediate solution from which they are absorbed and become highly active.

Lengthy essays have been written about drugs found to be inert. Why should any of them be uniformly active in the alimentary tract, and especially those in our possession of no definite formula?

The therapeutic agents which are completely worked out by our biologic chemists and administered into the blood channel give almost a uniform result. Yet a few unaccounted-for, untoward symptoms occasionally occur because of the variations of body chemistry.

We learned early in the history of the

administration of Salvarsan and like products that most or all of our untoward reactions were due to old distilled water, in which organic matter had collected, producing chemical changes in the drug and pathological results in the administration. It is unfortunate that these errors remain for the clinician to find out by clinical experience instead of from definite chemical knowledge. This is perhaps only a sample of what is overlooked in an everyday experience.

We are now just awakening to the knowledge of the sensitization of cells by certain substances, which probably means an addition or subtraction of one or more atoms of a given molecule, making it unstable and subject for immediate attachment from a similar compound.

As practitioners we wander along, picking up the newer things discovered by science, accepting all as true as per directions on the bottle without knowing the why and wherefore. This is wrong; clinical experience and scientific work should go hand in hand. Either is helpless without the other. No one should introduce drugs into the human system without knowing all their possibilities. Surgery is demanding efficiency at the hands of her surgeons, why should not general medicine require ability of her physicians?

We cannot all be chemical specialists or be able to go into minute analytical work, but we can have an understanding knowledge of its working principles. Organic and inorganic chemistry are misleading terms and should be discarded from our literature. Everything, however complicated, is composed of simple elements that are united after simple chemical laws. Although much more complex in their composition, the so-called organic compounds follow the same laws of uniting of elements as do the inorganic. If we have an understanding knowledge of these simple laws we will be able to harmonize our clinical work with the forerunning didactic, as laid down by the scientist.

Pioneering in every walk of life always meets with severe obstacles. So laboratory



diagnoses and treatment, consisting of long, tedious and expensive analyses, are objected to in very many instances. Rivalry is keen and those who are practicing medicine as a mere livelihood will cling to their old and simple methods. To them everything else is new-fangled and of doubtful character. Economic and commercial considerations are uppermost in the minds of many, which always works opposition to scientific work.

The best dressed doctor who lives on the boulevard and drives the finest limousine in town is always present. His microscope, under a bell-jar, stands at the most conspicuous place in the office, while burlap, flasks and other useless things to him, adorn the wall, where room permits between diplomas. Pretended analyses are made under very impressive ceremonies and Wassermanns done while you wait. Cults and religious healers scorn all.

All these have their influence with the public and make the work a discouraging one. The greatest disappointment comes from those in our ranks who, for naught but avarice, inveigle patients from the careful and painstaking analysts, yet such is being done every day. The patient becomes weary and credulous because all look alike to him. He sees the inducement of a much lower fee and all the promises he desires in sight. With or without a worthless analysis, he is placed upon a useless simple treatment that drags into months.

Much fakery and perverted types of practice are due to privileged ignorance. Our greatest ignorance and short-coming is in chemistry. If all who tried to heal knew thoroughly the simple principles of chemistry and especially some of the intricacies of biologic chemistry, there would be a complete change of heart.

To overcome this we as a medical society should urge for a more strenuous training on this branch in our colleges. It should be started in the high school. Instead of a one or two-year course, that of five or six years should be instituted. The attendance at associations and on post-

courses should be made compulsory. Examinations should be required every three to five years. Laboratories should be placed in every center by the state. Those who now attend societies are largely careful, progressive and scientific men. It is that vast army of the rank and file, "too busy stay-at-homes," who need to be lifted from the drug-giving, suggestive therapy to a rational and scientific basis.

A few drugs as, for example, quinine, are quite uniformly satisfactory, when given by the stomach; however, a soluble non-irritating form, intravenously administered, should be far more efficient and must soon replace the older types of treatment.

There must be radical changes from the present methods. The chemistry of the body cell must be studied and known. We laymen may not be able to work out these knotty problems, but should be efficient so as to handle them when simplified by our chemists.

We must school ourselves to know that, however inert a drug may be under ordinary conditions, it may find an affinity among some of the complex organic compounds of the body, there broken up and be chemically active.

The stability of the elementary cycle of some of the body cells may be disturbed in early life, becoming what we now call sensitized cells. They remain unsaturated as it were, and ready to be satisfied by combining with similar substances, and form new combinations, pathological in nature and action. Many of the symptoms we consider trivial, yet so strongly emphasized by the patient, may be accounted for in this manner.

The true pathology and treatment of the habitual usage of liquor and drugs can be successfully handled only under the guidance of a knowledge in cell chemistry and the reactions to these poisons.

Special idiosyncrasies, marked susceptibilities and natural immunities, are phrases often used in medical language and literature which, properly interpreted, would read, "A definite rearrangement of

cell elements making possible certain chemical reactions characterized by those conditions."

Those who have followed the experiments and writings of Crile must observe that the serious surgeon and anæsthetist considers the body cell primarily in the analysis of shock.

The proliferation of tissue cells we call tumors. We speak of this proliferation as being caused from an irritation and there rest our argument. When these cells become obstreperous, break out the reservation, invade other tissues and become parasitic in nature, we call them cancer. This is not the last to be said on tumors, but seems to be the rational course they take. Regardless of the theories of causes, the process is one of cell chemistry.

One of our most eminent authorities in this country told the writer that he cured many intractable old ulcers by injecting Ringer's solution in the vein. He was asked the mode of cure. He said he did not know, but that it cured. It seems only reasonable that atoms of elements were added to the diseased cells or at least they were rearranged by the introduction of this new compound.

Too often we are prone to conclude that a therapeutic agent is one that to cure disease must destroy the germs as we observe it in the physical world at large. It is useless to repeat to this body that it only becomes a neutralizing agent, breaks up soluble combinations, rearranging them into insoluble, and in the same manner converting the germ into an inert carbon compound for excretion. While more complicated, it follows the same simple laws governing the results of bringing together zinc and hydrochloric acid or any other simple combination. Salvarsan, quinine or anti-toxin, must eventually be found to follow the same law.

Kocher, that keen observer in surgery, in speaking on the application of iodine upon the selected spot of operation, said, "It makes no difference what strength is used, whether one-half of 1 per cent or 7 per cent, the results are the same." If it

merely seared over the surface, as some would believe, could we abbreviate our solution to that extent? Is it not more reasonable to believe that this peculiar element, though of single valiancy, may find for itself a strong affinity in elements of the germ, displace others and leave a harmless inactive body? The only service iron can be as a therapeutic is to satisfy some unsaturated compound that it may continue its normal function. It is safe to reason that mercury, the iodine salts and many other efficacious drugs, combine with the protein elements in the body and form other compounds, frequently useful but sometimes pathologic.

Drug actions in the body must be strictly chemical and must be identical under like conditions. This must be an unalterable law. When therapeutic agents are identical and when results vary it must follow that the chemistry of the body has differed. Therefore we should know as much as possible of the chemistry of the therapeutic agent and the same of the body. Failures will always be made, as there is no utopia, but much can be improved over the deplorable state of therapeutics of today.

Diagnosis must be largely placed upon a chemical basis. We must recognize metabolism, whether in disease or health, as an elementary exchange. Chemistry is that branch of science which treats primarily of the basic principles of all that exists. Energy and possibly even thought and mind are chemical by-products. Only through chemistry can we ever hope to reach the explanation of life.

To guide the mother in rearing her children, preparing her food, and in general home hygiene, we must know chemistry.

To know the body as it springs from the union of two cells, grows to maturity, withers in disease and disintegrates in death, we must be familiar with chemistry, for it is all chemical.

Much of this paper is manifestly theoretical and at present can not all be backed up by test tube findings. However, the theories are all based upon fundamental



facts. If Erlich's side chain theory be true and carried out to its logical conclusion, these ideas will not be wild.

We are moving rapidly and only time is required to prove if such be true. In the meantime I urge that all medical men become more familiar with this, the most essential branch of medicine.

### — R — **Sexual Neurasthenia.**

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Scientists after careful and painstaking investigations of many races and people, and who by reason of their experiences are entitled to speak authoritatively, have asserted that more than half the woe and misery of the most highly civilized nations is due to sex ignorance. We are also told that the rapidity with which the number of neurotics, perverts and homosexuals is increasing is appalling and that if these tendencies are not checked, their effect in the not far distant future will show a decided deterioration of the race. It is but a short time since these unfortunates were known only in certain districts in the larger cities, but now the pervert and invert is common in all walks of life. He abounds in rural as well as in urban communities and is no longer a curiosity. I shall in this paper give particular consideration to the more widely distributed patients whose varied ailments have their origin in sex irritation and who are really sexual neurasthenics. William J. Robinson defines sexual neurasthenia as "a condition of bodily exhaustion resting on a sexual basis." Acclaiming further the inability of a mere definition to express or convey an adequate idea of the condition, he directs a thorough study of the symptoms and the various phenomena of the disease.

The causes of sexual neurasthenia are found in the various elements of our civilization. The disease does not exist among savages nor in the barbarous tribes. Investigation discloses in the economic and industrial fields and in the social and

moral-religious codes many dogmatic restrictions which are strongly antagonistic to the laws of evolutionary growth and biological development. As in all cases of direct frustration of nature's plans, the result is a more or less perverted weak and inefficient product.

There is, of course, that occasional individual of exceptional brilliancy, the genius, who flames up for a time but has not the power of reproducing himself. In industry the individual is urged to ever greater exertion. The limited wage and uncertainty of employment make subsistence hazardous and act as a deterrent to marriage and the establishing of the family. Even the children in the public schools are crowded to the point of exhaustion and the social obligations of those who are nominally idlers are so strenuous as to seriously tax the vitality of that class. Directly irritating and injurious to the sexual sphere is all that is suggestive in dress, in the theater, the movies, in conversation that stimulates and arouses sex desire and is then met by the practically inflexible decree that this desire must not and shall not be satisfied. The cost to the race in free spirits born to rise and lead the world to higher and better things thus crushed and beaten down to the lowest depths of mediocrity can never be calculated. The conditions in a person's life which make a reasonably early marriage impossible tend strongly to the production of neurosis which makes the individual unfit for either marriage or parenthood.

Masturbation is a vice as old as written history, but it is only recently that it has acquired a really universal popularity. It is due particularly to conditions cited above and is a destroyer of initiative, causing its victim to follow the lines of least resistance and drift into comparative uselessness. It unfits him for any really active or constructive labor and the numbers of perverts and inverts and nervous wrecks whose anomalies have their beginning in masturbation are legion. Among the married people at the present time, coitus interruptus has reached the place where

it is undoubtedly more important in its evil effects than masturbation. The cause of this perversion is practically always that the advent of a child or more children into the family would compel a lowering of the standard of living or a loss of social position that they do not feel they can endure.

Sometimes one of the parties to this arrangement, usually the woman, gets by with a moderate degree of disturbance to the nervous system. This is generally because of frigidity. Occasionally the husband seems unaffected by this practice. In this event he will usually be found to be having extra-marital relations which are normal. This method of gratification is particularly disastrous to the man, producing a gradual lessening of sexual power tending to complete relaxation and impotence. In the woman irritation, insomnia, bad temper, general neurasthenic phenomena develop. This vice is particularly an addiction of our so-called middle class and is equally prevalent in rural and urban society. It is much more common in recent years since our more or less wise legislators placed such dire penalties on the transmission of the knowledge and means of contraception.

Continence adds a not inconsiderable number to the ranks of the sexual neurasthenics. Some very strongly sexed individuals, because of moral and religious considerations, fear of venereal disease, pregnancy, danger of being found out and possibly other reasons, maintain their chastity only by the exercise of practically all their nerve force and energy and eventually become complete neurasthenics.

An old chronic gonorrhea causing a posterior urethritis or prostatitis or stricture is a quite frequent cause of neurasthenia and impotence. The cases of sexual neurasthenia that can be credited to sexual excesses are very few, if indeed they exist at all. Alcohol, drugs and bad hygienic conditions and habits all contribute to the condition.

The symptoms of sexual neurasthenia are exceedingly numerous and of varied

intensity. No organ or structure in the body is exempt from attack and the effect may be anything from mere annoyance to real agony. General depression and inability to perform regular work are always present. The male victim of sexual neurasthenia, who has reached an advanced stage of the disease, presents a characteristic appearance. He informs us that he is impotent, also that his sex organs are shrunken, which statement is proved on examination when we find penis retracted, hard, often feeling like cirtallage, scrotum also contracted. That some of this is due to a psychic condition and feeling of shame is evidenced by the fact that contractions are less marked at future examinations. Sometimes the testicles are smaller than normal, nearly always they are exquisitely sensitive to the touch. Another class presents a very different condition. In these the penis is large, soft and flabby, the scrotum relaxed hanging low, pollutions frequent, generally atonic and often diurnal. Impotence is either relative or absolute. If less than complete, the erections are feeble and imperfect, ejaculation premature, except in some rare instances when it does not occur at all. These patients have no pleasure or satisfaction in any sex act, but there is an ever present irritation of the sex sphere that drives them to frequent indulgence, sometimes attempts at intercourse, oftener in furious masturbation.

The sexual neurasthenic is often greatly annoyed by frequent urination in the day time. At night he is very seldom troubled in this way, which fact excludes the possibility of enlarged prostate or other urinary disorders. Urination is usually painless. Some patients complain of more or less pain and burning during micturation. In the earlier stages the quantity is large, specific gravity low and color pale, often clear as water. As the disease progresses there is a steadily diminishing quantity of urine with a corresponding increase in specific gravity and heightening color. This urine is nearly always loaded with phosphates. Most of these patients are



constipated and suffer from intestinal fermentation, hence indican is present in large amounts.

Pains and aches are frequent and of varying intensity, often in the small of the back, sometimes on one side only, sometimes simulating renal colic, sometimes in the testicles, radiating down the legs.

Palpitation of the heart is a circulatory symptom following muscular effort or any excitement. The pulse is rapid, often 100 or more per minute, sometimes intermittent. There is of course heart lesion. Patients complain of cold feet, have difficulty in keeping warm in bed.

It is through their seeking relief for digestive disturbances that the general practitioner comes into contact with many patients, who are neurasthenic because of some sexual irritation which they have not suspected as a cause of their distress. The patient who gives a history of intractable digestive disorder and in whom gastric or duodenal ulcer, gall bladder infection and appendicitis are excluded, will practically always be found to have some irritation in the sexual sphere, the correction of which will result in the cure of the trouble for which relief was sought.

Among the digestive symptoms will be found all degrees of appetite from constant unappeasable hunger to complete anorexia. Emaciation will probably be present in either event as the assimilation is poor and metabolism rapid. Heavy breath, coated tongue, heart-burn in varying degrees, belching of gas and constipation, rarely diarrhea are among the prominent symptoms in these patients. Coitus interruptus, continence when maintained only by strongly repressive measures, and sometimes moderate masturbation are the sex conditions most often found back of this trouble.

The eyes may be easily tired. Muscae volitantes, floating specks before the eyes, are frequent and often very annoying to the patient. The sexual neurasthenic shows a marked incapacity for work. Before he gets too bad he may accomplish considerable in spurts, however, as the

disease progresses he works less and less finally being unable to concentrate on anything long enough to achieve any worth while results. He is mercurial in his disposition. Pleasant anticipation lifts into ecstasy. The least unpleasantness plunges into deepest gloom. Most of the time he is afraid of something. Often nothing in particular but just an idea that it is going to happen and that whatever it is it will be harmful to him.

The prognosis in most cases of sexual neurasthenia is good. This statement must be qualified by the provision that the patient's circumstances admit of some leisure and personal freedom so that he may come regularly for treatment and perhaps, take a vacation sometime during the period of his treatment. Then, too, we have some patients in whom the determination to live according to the cultural standards of the period is so strongly opposed by the sex urge that a nervous break-down results from the conflict. This patient, usually a woman, has probably been in the hands of several physicians, taken a great deal of medicine without at any time receiving much benefit. Being certain of our diagnosis of sexual neurasthenia we can not for obvious reasons advise this patient as to her future mode of living. The question is, shall we tell her the truth about her condition that to give her medicine is useless and let her go her way or shall we stall and prescribe drugs till in disgust she leaves us to consult some other doctor. In those patients living in lawful wedlock, whose neurosis is due to the practice of coitus interruptus, shall the physician endeavor to instruct them in a harmless, or at least less harmful, method of contraception, or shall he let them go on, see their health further impaired and the family broken up? This is a matter which of course the doctor must decide according to his light.

Practically all the remaining, and fortunately the greater number of sexual neurasthenics, involve the physician in no conflict with the moral code or cultural standard, leaving him free to direct the

correction of unfortunate habits and treat his patients thoroughly and without restraint. Among the saddest of these patients is the woman, relatively strongly sexed, married, usually a mother, but whose husband has been always a little too quick in completing the sexual act. His attentions arouse her to a high pitch of excitement, but reaching the climax ahead of his wife, leaves her in a terribly irritated condition which is followed by a sleepless night and sooner or later results in complete nervous breakdown. These women frequently end in suicide, often commit murder and many become insane. Here of course the husband must be instructed as to the enormity of his offense, as it is a matter of ignorance of the woman's needs and rights and is responsible for his conduct. A few months of complete rest and abstinence from sex acts, tonic and reconstructive treatment, will restore these patients to normal in most instances. The physician must here satisfy himself of the absence of, or correct any posterior urethral or prostatic irritation or strictures in, the husband's urethra.

The medicinal treatment is tonic and reconstructive mostly. The compound syrup of hypophosphates and the glycerophosphates are the most satisfactory for continuous administration. Arsenic and iron are useful. In badly relaxed cases strychnine in full doses and for short periods only may be useful. Long continued administration of this drug, especially if given in large doses, may produce irreparable injury in these cases. It is always advisable to change the form of treatment frequently from liquid to powder, from powder to tablet, to a liquid of different color with reasonable frequency, as these patients are nearly always suspicious and on the lookout for what are to them indications that the physician is losing interest in their case.

The physician must be able to inspire and maintain the complete confidence of the patient as to his unselfish and earnest desire, along with his ability, to cure him. Should it become evident that the patient

suspects that the doctor has lost interest in his case or that he is principally interested in the amount of money to be obtained from the treatment, he should be discharged, as further progress will be impossible. If the patient is to have a change of scene for a period during his term of treatment, care should be taken that his new environments shall be pleasant and entertaining to him.

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—R—

#### Human Actinomycosis.

By MERVIN T. SUDLER, M.D., Rosedale, Kansas.

Read before the Kansas Medical Society, at Topeka, Kan., May 3-5, 1916.

The invasion of the tissues of animals by one of the Trichomytes or higher bacteria produces the disease known clinically as actinomycosis. It was first described in France in 1826 by Leblanc, who observed it in cattle. The particular species causing the disease is probably *Streptothrix Actinomycotica*; though the suggestion has been made by Wolf and Israel (mentioned in Hiss and Zinner) that several varieties of the *Streptothrix* may be capable of causing it. Subsequent work of other observers has failed to confirm this and only one species has been found.

Geographically, the disease has wide distribution; cases having been reported from numerous points in Russia, Italy, Austria, Egypt, Algeria, Australia, England, and North America.

Cattle suffer most frequently from the disease, pigs occasionally, and there have been several cases reported in horses.

The disease is diagnosed by finding the ray fungus by means of microscopical examination of the pus. The gross appearance of the pus is characteristic. It is very thick, being difficult to aspirate, and shows



the characteristic "sulphur granules." These are soft granules about one millimeter in diameter. They vary in color from very pale yellow to a darker orange. They appear on the dressings; or if some of the pus be caught in a test tube and allowed to run down the side in a thin layer, the granules show quite plainly. When crushed and examined under a microscope, the characteristic branching mycelia, or "rays," can be seen.

The organism is not easily grown artificially. It grows best as an aerobe, but grows sparingly and the growth is very slow. It is usually a week before the growth becomes visible. Liebman (quoted by Ruhrah, *Annals of Surgery*, Vol. 30, 1899) states that he was able to grow it by inoculating the seeds of beans, lentils, and barley. The plants and the parasite would develop simultaneously and the parasite would produce the disease. He also found the resistance of the organism very great. It would resist boiling for fourteen minutes; that 5 per cent carbolic acid solution had very little effect; and it took a 1 to 1,000 solution of bichloride to kill the organism.

The disease seems to be contagious to a very little extent, if at all. (Fritz Mass: *Annals of Surgery*, Vol. 38.) Salmon placed twenty-two cattle with an infected one for four months and none of them developed the disease. However, McKents reports a suspicious case in a Royal Victoria Hospital where a nurse who was caring for a case developed the disease. Proof of direct contagion was lacking. Direct inoculation has usually succeeded, especially if a foreign body, or other means of irritation, be introduced with it. (This will be referred to again in connection with the clinical manifestations of the disease.)

It is among the rare diseases of human beings, but it is an obstinate serious condition, and is often mistaken for tuberculosis. It is much more common in males than in females; and it is also more common among those living in the country than in those living in the city. In the tabulation of 1,094 cases by Ruhrah, the

locations of the lesions is as follows:

Head and neck	- -	56 per cent
Digestive tract	- -	20 per cent
Pulmonary	- -	15 per cent
Skin	- - - -	2 per cent
Doubtful	- - - -	6 per cent

The prognosis varies according to the location. According to McKentz the mortality is as follows:

Face and neck	- -	11 per cent
Thorax	- - - -	83 per cent
Abdomen	- - - -	71 per cent
Cerebral	- - - -	100 per cent

The symptoms and pathology vary somewhat with the location. Around the face and neck there is at first an induration and swelling; later, sinuses appear, with the characteristic pus. Foreign bodies have been found in a number of instances—pieces of straw, splinters of wood, or the hulls of seeds. The inhalation of infected dust or particles of straw may account for the infection of the lungs; or they may be invaded through the esophagus. In the intestinal tract, the head of the cæcum and appendix are most frequently affected, as here the stasis is the greatest. Scudder (*Boston Medical Journal*, April 29, 1915) reports a case of the transverse colon and abdominal wall in which a fishbone was found, which was said to have been swallowed twelve years previous. He infers that the irritation of the foreign body was responsible for the presence of the disease. The occurrence has been noted in some instances where the patient has had the habit of chewing straws.

The disease grows directly across the fascial planes and involves adjoining structures (Cope: *British Journal of Surgery*, 1916); although it seems to prefer the connective tissue. The lymphatic glands are never involved, as they are in tuberculosis. The original focus may heal, and only the secondary involvement be present. Keppler (*Archiv. f. Chirurgie*, Vol. 104) believes that metastases in bones may be possible. There seems to be no doubt that the disease is spread metastatically, for primary lesions have been reported in

the kidneys and bone. Dr. Goss in a letter, March 22, 1916, reports a case of actinomycotic abscess in the wall of the right ventricle of a pig.

The disease is probably rare in human beings in Kansas as no published records of any cases have been found; and the one reported in this paper is the only one in over four thousand patients admitted to the Bell Memorial Hospital. (After this paper was presented, two other cases which had occurred during the past year in the practice of physicians present were reported to the author. Hence it is probable that the disease occurs more frequently in human beings than is supposed.) However, the disease is common among cattle; as Dr. Goss reports forty-four cases coming to the out-patient department of the Kansas Veterinary College at Manhattan from 1912 to February, 1916, these comprising 2.9 of all cases treated at the clinic.

The treatment is a combination of medical and surgical means, none of them being specific or satisfactory. Potassium iodide is the drug invariably mentioned. It was first used by Thomasson in 1885. Strangely enough a weak solution of potassium iodide does not kill or even inhibit the growth of the fungus. (Annals of Surgery, 1903.) This drug seems to act best where there is induration without abscess formation; and particularly where there is no secondary infection. A case is reported where 360 grains of potassium iodide in twenty-four hours was without result. (British Medical Journal, October 9, 1915.) Nothing helps an abscess but drainage. Telford used iodine and salvarsan in one case and believed that the last-named drug helped. Sardemann concludes that the X-ray combined with iodides is most efficient. (Beitrag, Koin. Chir., Bd. 90, 1914.)

Cope recommends autogenous vaccines both for the actinomycosis and the mixed infection. He states, however, that they fail in the extensive thoracic and abdominal cases. He recommends commencing with a half million fragments as an initial

dose. He reports two cases of facial actinomycosis apparently benefited by vaccines, and one of the chest which proceeded steadily to a fatal termination in spite of them.

The surgical treatment consists of the excision, drainage of abscesses, and cauterization. Excision is the only satisfactory form of surgical treatment. Cauterization seems to have no value, perhaps because the organism is too resistant to heat.

To summarize the matter of treatment: There is no satisfactory treatment of actinomycosis. The hard indurated type without pus formation seems to react well to the large doses of potassium iodide and X-rays. The deep-seated type, affecting the lungs, liver, kidneys, intestines, etc., is usually fatal eventually and no specific method of treatment has so far been discovered that can be termed satisfactory.

#### *History of case observed:*

A young strong healthy negro, aged 20, began in October to have pain in his back. He was first seen on December 19, 1915, when he had a fluctuating mass at the triangle of Petit on the right side. An aspirating needle was introduced into this, and even though the mass was of large size, only a small amount of very thick pus escaped. The area was then frozen and opened and dressings applied. The characteristic granules on the dressings were noticed and the diagnosis confirmed by microscopical examination, by Dr. Major. An exploratory laparotomy revealed a free appendix and cæcum. The abscess was enlarged and plastered down, there being adhesion between it and the liver. The original drainage incision healed and another abscess developed near it. This was opened and healed. The tenth rib was resected and another abscess was found. Every afternoon the patient's temperature rose to 102 to 104 degrees. He has been given potassium iodide in doses amounting to 210 grains a day for a month, without apparent result. Calcium sulphide was next tried and his stomach rebelled, the drug having shown no appreciable effect upon the disease. The



incision has been dressed with Doranti's solution:

R Iodine - - - - -	1	0
Potassium Iodide - - -	2	0
Guaiacol - - - - -	5	0
Glycerine, qs. ad. - - -	100	0

X-ray treatment gave no appreciable results. All attempts to cultivate the organism failed, so it was impossible to try a vaccine treatment. The patient left the hospital on June 1, 1916.

At the time of this patient's discharge from the hospital he was slightly stronger and his appetite was better, though he was very thin and the range of temperature varied from 98 in the morning to 105 in the afternoon; his pulse from 90 to 115. The drainage had decreased somewhat in amount. From the operations and X-ray examinations, evidently the liver, kidneys and pleura were involved.

### —R— UNIVERSITY NOTES

#### **The Fat Content of Bottom Milk as Affected by Temperature, and Period of Pasteurization.**

HARRY CALVIN BERGER, M.D., Kansas City, Missouri.

From the Children's Medical Department of the University of Kansas (Bell Memorial Hospital, Rose-dale).

In prescribing feedings for infants we frequently find it desirable to make use of a fat-free milk as one of the component parts. How often we order this and obtain something quite different.

Many times, after most careful directions, I have found the mother using, for this purpose, milk that has come to her hands pasteurized at the dairy. This was labeled "Pasteurized," with the date of pasteurization. The temperature to which the milk was heated, the period of time during which it was kept at this temperature, or how quickly it was reduced to the temperature at which it was delivered, not being stated on the label.

In a number of such samples, on analysis, I found there remained from 1.8 per cent to 2.6 per cent of fat in the milk,

after the gravity cream had been carefully removed. This usually being somewhat over 2 per cent.

It was with the hope that, if the above facts could be determined by learning the method of pasteurization employed by the various dairies, we might possibly be able in a measure to compensate for this condition, or at least know what percentage of fat we had in the skimmed milk, that I set about this work.

From the literature I find the following observation by Rosenau:

The heating of milk to 150 degrees F. for thirty minutes markedly retards or entirely prevents the rising of cream.

S. Henry Ayers pasteurized milk at 145 degrees F., for a period of thirty minutes. He then cooled it to 50 degrees F., in a salt solution, in various periods of time. His conclusions were that:

(1) Pasteurization always diminishes the amount of cream that will rise by gravity.

(2) This effect is very variable.

(3) The method of cooling, or the time consumed in cooling, has no effect on the rise of the cream.

I set out to determine the effect of the various temperatures, and the length of exposure to these during pasteurization, on the separation of the butter-fat from milk by gravity.

A series of samples was also centrifugalized, with results parallel to those where gravity was employed.

For this work reasonably fresh raw milk was obtained from the various dairies, or their agents, thoroughly mixed, and a sample taken to determine the percentage of butter-fat present in the whole milk. The remainder was divided in flasks of the same shape and equal volume. One of these was set aside and remained raw as a control. The remaining flasks were pasteurized at the various temperatures, and during the period indicated in the table. After pasteurization they were set aside at approximately 75 degrees F. for twelve to fourteen hours, no effort being made to bring them to this temperature immedi-

ately. At the close of this time a specimen was taken by pipette from the bottom of each flask and examined for content of butter-fat.

For this work I made use of the "Facile Junior" Babcock machine, furnished by the Burrell Company of Little Falls, N. Y.

The table here inserted gives the temperature at which the milk was pasteur-

of the milk taken by pipette from the bottom of the flask, twelve to fourteen hours after pasteurization. I have also inserted in the table the percentage of butter-fat present in the original sample of whole milk, and in a specimen pipetted from the bottom of the control flask of raw milk after it had been set aside for twelve to fourteen hours.

When the top portion of raw milk, which has remained undisturbed for a period of six hours or longer, is removed to just below the "cream line," we expect to find no more than 1 per cent of fat remaining in the skimmed milk. The milk in the lower portion of the container has a much lesser amount of fat. This has been borne out by the raw milk controls recorded in the table.

In the specimens that were pasteurized, it will be noted, from .98 per cent to 2 per cent of fat was retained, even in the lowermost portions of the milk. That in the total milk, below the cream line, of course being correspondingly higher.

I was disappointed, however, in that I found the relation existing either between the temperature, or the period of pasteurization, and the percentage of fat retention, to be not so marked as I had hoped. For instance, milk heated to 140 degrees F. for a period of thirty minutes had an average fat retention of 1.9 minus per cent, while a specimen heated to 150 degrees F. for thirty minutes had an average fat retention of 1.8 plus per cent. The temperatures within the range here included seemed to have little variance in effect. The time period, however, yielded a definite gradual increase in fat retention as the time of pasteurization was increased. This again, however, in the limits that are ordinarily employed in commercial pasteurization, leaves a negligible result. The greatest variation between a thirty-minute and a forty-minute exposure being about .2 per cent. Where through carelessness or ignorance there is a great variation in the time element, we would find a correspondingly great variation in the fat retention.

## 140° F.

Minutes	5	10	20	30	40	Raw	Whole Milk	Sample No.	Period
No.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.		
1	.....	1.1	1.5	1.3	.....	.6	4.4	i	13 hrs.
2	1.6	1.1	1.7	1.8	.....	.4	3.7	iii	12 hrs.
3	1.4	1.7	1.9	1.9	1.9	.5	3.8	iv	13 hrs.
4	.9	1.6	1.8	1.6	1.9	.3	4.3	vi	14 hrs.
5	.7	1.4	1.6	1.7	1.8	.5	3.9	vii	12 hrs.
6	1.1	1.6	1.5	2.1	1.9	.4	4.1	viii	12 hrs.
7	.6	1.3	1.5	1.7	.....	.7	3.7	x	13 hrs.
8	.8	1.4	1.7	1.9	.....	.4	3.6	xi	13 hrs.
9	.9	1.5	1.8	1.7	1.9	.3	3.8	xii	12 hrs.
10	1.1	1.8	1.7	1.9	1.9	.5	3.6	xiii	14 hrs.
11	.8	1.3	1.5	1.8	1.9	.6	3.7	xiv	14 hrs.
12	1.	1.5	1.9	2.1	2. *	.7	3.9	xv	12 hrs.
Av.	.98*	1.44*	1.67*	1.9†	2. †	.49*	3.9†	xvi	12 hrs.

\* Plus. † Minus.

## 145° F

Minutes	10	20	30	40	50	Raw	Whole Milk	Sample No.	Period
No.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.		
1	1.2	1.4	1.6	1.9	2.1	.3	3.5	i	13 hrs.
2	1.2	1.7	1.9	1.7	1.9	.6	3.9	iii	13 hrs.
3	.9	1.3	1.7	1.9	2.1	.5	3.8	v	13 hrs.
4	1. *	1.5	1.7	1.9	1.9	.3	4.2	vi	13 hrs.
5	1.3	1.5	1.7	1.8	2.1	.3	4. *	vii	12 hrs.
6	1.	1.7	1.9	2.3	2.1	.5	3.7	viii	12 hrs.
7	.9	1.5	1.7	1.9	1.8	.7	4.2	ix	13 hrs.
8	1.5	1.4	1.6	1.8	1.9	.4	3.6	x	14 hrs.
9	1.	1.6	1.9	1.6	1.8	.6	4.3	xiii	13 hrs.
10	1.3	1.8	1.6	1.8	2.1	.5	3.6	xiv	13 hrs.
11	.9	1.9	2.	1.8	2.2	.8	3.9	xv	12 hrs.
Av.	1.1*	1.6†	1.7*	1.8*	2. †	.5	3.9†	xvi	12 hrs.

\* Plus. † Minus.

## 150° F.

Minutes	5	10	20	30	40	Raw	Whole Milk	Sample No.	Period
No.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.	Pr ct.		
1	.8	1.5	1.5	1.7	1.9	.6	4.4	ii	12 hrs.
2	.9	1.3	1.5	1.9	.....	.9	3.7	iv	14 hrs.
3	1.3	1.4	1.9	1.8	.....	.3	3.5	vi	13 hrs.
4	1.7	1.8	2.	1.9	.....	.5	4.1	viii	13 hrs.
5	1.1	1.7	1.6	1.5	1.9	.3	3.6	ix	13 hrs.
6	.9	1.4	1.7	1.9	1.9	.5	3.9	xi	13 hrs.
7	.8	1.6	1.4	1.8	.....	.4	3.8	xii	13 hrs.
8	1.	1.6	1.8	1.8	.....	.6	4.3	xv	13 hrs.
9	1.3	1.7	1.6	2.	.....	.7	3.8	xvii	12 hrs.
10	.8	1.6	1.8	2.	1.9	.8	4.2	xviii	13 hrs.
11	1.1	1.5	1.6	1.8	2.	.6	3.6	xix	12 hrs.
Av.	1.0*	1.55*	1.67*	1.8*	2.	.56	3.9	xx	12 hrs.

\* Plus.

ized, the period of time during which it was exposed to this temperature, and the percentage of fat remaining in a specimen



It seems worth while, at this time, when we so often feel that the milk supply must be pasteurized for infant consumption, and feel free to prescribe pasteurized milk under these conditions, using in conjunction fruit and animal juices, to call attention to the fact that we cannot obtain anything approximating fat-free milk for our prescription unless the cream has been removed before pasteurization.

So when prescribing a skim milk, prepared by the mother or nurse from whole milk which is delivered to her pasteurized, we should remember that we are dealing with a milk that contains, below the cream line, about 2 per cent of fat. Also that the variation is great and the percentage may be considerably over 2. In no case do we approach the 1 per cent or less that we find in raw skimmed milk.

This fat retention has been explained by the fact that the normal agglutination of the fat droplets is destroyed, and they are homogeneously distributed through the milk. This, however, has no effect on the fat for use by the body, the fat itself remaining unchanged chemically.

ROSENAU: Bulletin No. 56, Hyg. Lab., Pub. Health Service, 1909. Circular No. 153, U. S. Dept. Agri., Bureau of Animal Industry, 1910.  
S. HENRY AYERS: U. S. Dept. Agri., Bulletin No. 240, page 23.

## MISCELLANEOUS.

A recent investigation made by the U. S. Public Health Service in connection with studies of rural school children showed that 49.3 per cent had defective teeth, 21.1 per cent had two or more missing teeth, and only 16.9 per cent had had dental attention. Over 14 per cent never used a tooth brush, 58.2 per cent used one occasionally and only 27.4 per cent used one daily. Defective teeth reduce physical efficiency. Dirty, suppurating, snaggle-toothed mouths are responsible for many cases of heart disease, rheumatism, and other chronic affections. The children are not responsible for the neglected state of their teeth. The ignorant and careless parent is to blame for this condition—a

condition which hampers mental and physical growth and puts a permanent handicap on our future citizens. School teachers can and are doing much in inculcating habits of personal cleanliness on the rural school child but this will fail of the highest accomplishment unless parents co-operate heartily and continuously. This is a duty which we owe our children.

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### An Impostor.

A man who styles himself B. F. Little has recently been collecting money from physicians in Oregon and Washington under the pretense of being a representative of D. Appleton & Company, the medical book publishers of New York. The man's plan is to say that he is collecting for the Western Students' Benefit Association of Denver, Colo. Doctors in Puyallup, Wash., and Coquille, Ore., are reported to have been his victims.

D. Appleton & Company are endeavoring to have the fact made known to doctors in the Far West that this man is an impostor and has no connection whatever with their firm, and that any payments which are made to him are of course at the risk of the doctor.

—————R—————

Catton of the University of California Medical School reports (Jour. A.M.A.) the results of some experiments to determine the effect of iodine medication upon the spinal fluid. No iodine or iodine compounds were found in the spinal fluid, regardless of the amount of iodine administered by mouth. He concludes "Either iodine compounds do not pass the ependymal cells of the choroid plexus in any measurable quantity, or such iodine as does reach the spinal fluid is very rapidly fixed in the tissues."

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# THE JOURNAL

*of the*

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### The Lecture Bureau.

Someone having great solicitude for the welfare of the society, but little forethought and no comprehension of the difficulties to be met, suggested that the JOURNAL conduct a lecture bureau for the county societies—a convenience through which the county societies might secure addresses on scientific subjects for their regular meetings. We took the matter up with the secretaries and have received replies from a sufficient number to indicate that the idea is being favorably received and we have requests for lecture dates from some twelve or fifteen societies. We expect to have our list of lecturers and subjects completed in a very short time, and will send the list to those who have asked for dates.

We wish to call particular attention to the fact that it is the purpose of this bureau to furnish lecturers for regular meetings of county societies. Dr. Nesselrode, the very efficient chairman of the Committee on Hygiene and Public Health, has a lecture bureau for public meetings and has already mailed a list of those who will fill dates of this kind. This list will be found on another page of this number, under the head of Societies.

Every county society in the state is supposed to have at least one public meeting

during the year. Many have found that the most satisfactory way to conduct these meetings is through the women's clubs. They are very ready to take hold of the arrangements for such a meeting and have generally shown a considerable appreciation of the efforts of the societies in this direction.

### To Prohibit Dispensing by Physicians.

Some years ago an effort was made by the pharmacists to secure legislation which would prevent dispensing by physicians. The bill introduced at that time provided that physicians who supplied their patients with medicine must also give them a prescription for the medicine so supplied. While not in itself prohibitive of dispensing, its effect would have been approximately the same, at least in so far as the pharmacist was concerned. We have been handed a copy of a petition which is now being circulated in Kansas. It reads as follows:

To the Legislature of the State of Kansas.

Believing that the interests of the general public and the welfare of the people of the state in their health and well-being would be subserved by a law prohibiting sales of medicines, either patent, proprietary, or on prescriptions of practicing physicians, except through regularly established drug stores at which are maintained registered pharmacists; and believing that the sales of drugs and medicines by general stores, grocers, and what is known as the wagon medicine vendor or peddler, are inimical to and endanger the health and lives of the people of our state: We, the undersigned citizens and taxpayers of the State of Kansas, do most respectfully petition and appeal to your honorable body to enact strict laws regulating the sale and dispensing of drugs and patent and proprietary medicines, with an effective inhibition against such sales except through established drug stores, at which are maintained regularly registered pharmacists.

On first reading this petition one is inclined to commend its purposes, but on closer scrutiny one wonders how the "interests of the general public and the welfare of the people of the state in their health and well-being" would be better subserved by limiting the sale of patent medicines to drug stores. If the class of drugs that can be sold by promiscuous vendors is inimical to the health and welfare of the public we fail to see how that danger will be minimized by passing them over the counter of a drug store.



The matter of the sale of patent medicines is only the gauzy drapery which covers but does not conceal the attractive features of this petition. Its essential purpose is to secure legislation which will prohibit dispensing by physicians, as is plainly set out in its last sentence.

What such legislation means to the pharmacist may be gleaned from a synopsis of a paper, read before the Oklahoma Pharmaceutical Association, which accompanied this petition. The author of this paper says: "This day we use the grocer's sign and pour from one bottle into another and call it a prescription, and reap as the benefits of a college training the paltry profits of a grocer. Our prescription case has one more move and that is into the alley. We have let encroach upon us the office-prescribing doctor, a deluge of proprietary remedies and secret nostrums until our prescription case reflects nothing but our own mistakes."

Perhaps his analysis of the situation is correct, at any rate he ought to know. But, if the pharmacist finds his business in such condition that he must run a chop house in connection with his drug store, we will suggest that he will more surely succeed in reviving his business by keeping for sale the things people want to buy than by attempting to compel them by law to buy the things he has or wants to sell. This is the plan, however, upon which the author of the paper referred to proposes to rehabilitate his declining art. He would first have the legislature define substitution as follows: "It shall not be termed substitution if we use any standard pharmaceutical so recognized, so long as their formulas are identical."

Next he would prohibit dispensing by the doctor and finally he would "create a board of censorship, and these chaotic conditions will be cleared up. This probably might necessitate a small appropriation, but when once formulated and working, then the expenditure will be reimbursed to us as profits from the overpriced proprietary patent medicine, secret nostrums, etc., or they shall be prohibited

from shipment into the state."

Putting the proposition in plain terms, this advocate of special legislation would first legalize substitution, then prohibit the sale or dispensing of drugs of any kind by others than registered pharmacists, then he would throw out all those preparations that cannot be sold at as great a profit as he desires.

Very simple indeed. The doctor *must* write a prescription, the patient *must* go to the druggist to get it filled, the druggist may substitute what he may happen to have in stock for the thing prescribed, or the doctor must confine his prescription to the drugs which the pharmacist wishes to keep in stock.

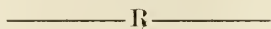
The Kansas pharmacist needs no legalized definition of substitution, nor does he need a board of censors to help him select his stock. If we will just pass a law compelling every one requiring medicines to buy them from him, he will take care of the substitution and the proprietaries.

The gentleman who read the paper in Oklahoma has diagnosed the case very satisfactorily, except that he has entirely overlooked some of the basic etiologic factors. It is true that the "office-prescribing doctor" and the proprietary remedies have encroached upon the legitimate business of the pharmacist, but there were reasons sufficient for that encroachment.

No doctor cares to send his prescriptions to a pharmacist who himself prescribes for every ailment, from corns to meningitis, frequently using the prescriptions on file in his store for the purpose. No doctor cares to send his prescriptions to a pharmacist who will substitute salt for iodide of potassium. No doctor cares to send his prescription to a pharmacist who refills them perpetually, for the original purchaser and for twenty or thirty others to whom they have been recommended, without regard to the ailment. No doctor who has seen the nausea and disgust of his patient, on trying to swallow some of the muddy looking, ill smelling, vile tasting concoction the druggist

has succeeded in making out of his prescription, is likely to regret the advent of the proprietary preparations, among which he may usually find one containing the combination of drugs he wishes to use.

Suppose we help them get the law they are petitioning for, but add to it a clause providing that a druggist guilty of substituting shall forfeit his license, and another providing that druggists shall keep in stock everything the physician may choose to prescribe. This would be absolutely necessary if the doctor is prohibited from dispensing. It might also be advisable to more rigidly enforce the laws regulating the practice of medicine.



### Passing of the Old Regime.

That great changes are to occur in the practice of medicine during the next few years is easily predicted. Many have already foreseen the doom of the family physician, but few have been able to predict the plans upon which the newer practice will develop. Cabot's idea of group medicine has taken root in some localities and clinics, patterned after the Mayo clinic, are to be found in many of the cities and larger towns.

Until the outcome of the present agitation for universal sickness insurance is known, the status of medicine must be uncertain. It might be well to consider the eventual adoption of sickness insurance as practically settled, and to determine as early as possible the most efficient plan upon which the business may be handled. From the slight experience available here it would seem now that the group plan will best meet the requirements. This plan is applicable to the conditions of the country as well as to those of the city. Physicians from a number of neighboring small towns may perfect a group organization which will afford inestimable benefits to themselves and their clientele.

It has also been suggested that in the near future the practice of medicine will be entirely under state control and that public health officers will supplant the regular practitioners. One must concede the

growing importance and widening scope of the public health service, and it may be possible that this tendency presages its ultimate domination of the field of medicine. It is safe to say that in the final adjustment that system or arrangement which promises the greatest efficiency will predominate.

Publicity has done a great deal toward solving the problem of the future of medicine, though it has shown some very unexpected results. Publicity has given rise to some popular ideas that have readily been adopted and developed by the public health authorities, in conjunction with the physicians of various localities. The free examination of school children, free examination weeks for tuberculosis, etc., and baby weeks, have come to be expected and appreciated, but they have also popularized the idea of physical examinations for those who are not sick, as a precautionary or preventive measure. This idea has been fostered and further developed by large corporations for their employees, and by insurance companies for their patrons.

The first conception, however, of the greater possibilities in this field of medicine was manifested in the organization of the Life Extension Institute of New York City. The plans adopted by this association are those first worked out by some of the leading insurance men of New York for the benefit of their clients. Former President William H. Taft is chairman of the board of directors, and Gen. William C. Gorgas is consultant hygienist. Among the prominent medical men who have become identified with the organization we note the following: Surgeon-General Rupert Blue, Dr. H. M. Biggs, Dr. Alexander Graham Bell, Dr. William J. Mayo, Dr. Victor C. Vaughn, Dr. L. F. Barker and Dr. Harvey W. Wiley.

The purposes of the organization may be appreciated from the following extracts from the prospectus in which the scope of the work is set out:

"To establish and maintain a central institute of national scope devoted to the science of disease prevention supported by



a large board of recognized authorities in the various fields of health and life conservation."

"To direct its efforts not only to prevention of disease, but to its early discovery. For this purpose to urge and apply periodic health examinations to the end that health and life may be conserved, and that the habit of having health examinations may be encouraged and eventually become a common practice among our people."

"To engage trained physicians throughout the country, and to establish laboratories for the purpose of carrying on physical examinations and research work."

The expenses of the institute are to be met by a small fee charged for the services rendered individuals and organizations. Blanks are sent out which, when properly filled out and returned with a check for five dollars, entitles the applicant to certain services explained in detail on the back of the application. This reads as follows:

"Membership in the Life Extension Institute (\$5.00 per annum) entitles you to the following service:

"Examination of eyes, ears, nose, throat, mouth, teeth, tongue, lungs, heart, circulation, skin, glands, stomach, liver, abdominal organs and general bodily condition.

"Examination for evidences of rupture, varicose veins, faulty posture, flat-foot, spinal curvature, deformities and asymmetries.

"Tests of the vision and hearing, and of the brain and nervous system for paresis, locomotor ataxia and other central nervous affections or nervous instability.

"Height, weight, chest and abdominal measurements.

"Chemic and microscopic examination of the urine.

"Blood pressure ascertained by the Auscultatory method.

"Reports of the conditions found are considered in connection with the statement furnished by the applicant on the form provided by the institute covering family and personal history, past illnesses,

dietetic and general living habits.

"The examiner's report, the laboratory report and the personal history blank are studied and interpreted by physicians skilled in this work, and final report is made by the institute to the individual, and to his doctor if desired.

"Monthly health letters on personal hygiene and living habits. Keep-well leaflets containing special information applying to the particular needs of the individual as to the care of the body and its organs, also as to diet, exercise, rest, etc."

For ten dollars the applicant will be entitled to the above examination with three additional examinations of the urine—one every three months—and a hemoglobin blood test.

Had such an institution had men of less professional prominence for its promoters its motives might have been questioned by the man in the field, but the exceptional high standing of the men who are responsible for its organization, and of those who are lending their names and their help in its further development, should be a sufficient guarantee of its trustworthiness and of its unselfish motives.

Should this institution meet the popular approval its promoters have every reason to expect, it will mean much to the medical profession everywhere. It will have pointed the way to a most comprehensive and thoroughly efficient system of practice.

—R—

**Dr. Walter S. Sutton.**

News has just reached us of the death of Dr. Walter S. Sutton, of Kansas City, Kan., member of the faculty of the School of Medicine of the University of Kansas, following an operation. Doctor Sutton last year was called to France by the staff of an American hospital on the French front. He served five months in the field and for two months assumed charge of the base hospital.

—R—

A card to one of the advertisers will let him know that you read your Journal.

## SOCIETY NOTES.

### Public Health Meetings.

The following is a list of the Subjects and Speakers for Public Meetings. For information in regard to dates for these speakers write to C. C. Nesselrode, M.D., Chairman Committee on Health and Public Instruction, Kansas City, Kansas.

"The Development of the Nervous System in Children," Dr. O. D. Walker, Salina, Kansas.

"Relation of Mental Instability Toward Society," Dr. C. C. Goddard, Leavenworth, Kansas.

"Submarines in Medicine," Dr. Marion Truehart, Sterling, Kansas.

"Eugenics," Dr. J. A. Dillon, Larned, Kansas.

"Oral Hygiene and Prophylaxis," Dr. J. A. Dillon, Larned, Kansas.

"Kansas and the Tuberculosis Problem," Dr. C. S. Kenney, Route 1, Norton, Kansas.

"Prevention and Treatment of Tuberculosis," Dr. W. E. Currie, Sterling, Kansas.

"Causes and Effects of Faulty Breathing," Dr. J. R. Scott, Newton, Kansas.

"Causes and Treatment of Cancer," Dr. O. D. Walker, Salina, Kansas.

"The Typhoid Fly," Dr. S. J. Crumbine, Topeka, Kansas.

"Hidden Dangers," Dr. J. E. Sawtell, Kansas City, Kansas.

"Preventable Blindness," Dr. J. W. May, Kansas City, Kansas.

"Rural Sanitation," Dr. G. G. Sippy, Topeka, Kansas.

"Factors Other Than Medical in the Causation of Death," Mr. W. J. V. Deacon, Topeka, Kansas.

"Food Adulteration," Mr. Leon Congdon, Topeka, Kansas.

"Child Hygiene," Dr. Lydia Allen De-Vilbis, Topeka, Kansas.

"Infections," Dr. Emma L. Hill, Oswego, Kansas.

"What Preventive Medicine Has Done for Civilization," Dr. Marvin T. Sudler, Rosedale, Kansas.

"Cancer: What It Is and What We Know About It," Dr. Marvin T. Sudler, Rosedale,

Kansas.

"The Cancer Problem," Dr. C. C. Nesselrode, Kansas City, Kansas.

"The Co-operation of Parents and Teachers in Detecting Physical Defects in Children," Dr. Hugh B. Caffey, Pittsburg, Kansas.

"Boys, Cigarettes and Tobacco," Dr. C. W. Reynolds, Holton, Kansas.

"The Problem of Social Diseases—The Great Social Evil—Eugenics—Individual and Racial Development—Individual Repeats History of Race," Dr. Howard N. Moses, Salina, Kansas.

### SHAWNEE COUNTY SOCIETY.

The regular monthly meeting of the Shawnee County Society was held in the Commercial Club Rooms on Monday evening, November 6. Dr. Richard L. Sutton of Kansas City favored the society with his presence and a very interesting and instructive paper on the treatment of syphilis. After reading his paper Dr. Sutton presented several clinical cases of skin disease, which he diagnosed and for which he suggested treatment. There was a much larger attendance than usual.

### COFFEY COUNTY SOCIETY.

The Coffey County Medical Society held its regular meeting in the Traveler's Hotel at LeRoy, November 2. A banquet was given the attending physicians. The annual election of officers was held at this meeting and resulted as follows: President, Dr. J. C. Fear of Waverly; vice-president, Dr. A. K. Burry of Burlington; secretary, Dr. C. C. Culver of Burlington; treasurer, T. R. Norris of Burlington; delegate, H. G. Herring of LeRoy; censor, M. L. Stockton of Gridley.

Dr. Lawrence of Emporia presented a paper on "Bone Lesions" and exhibited some X-ray plates of cases.

The next meeting will be held in Burlington in February.

### FRANKLIN COUNTY SOCIETY.

The Franklin County Society regrets very much the loss of its very efficient



secretary-treasurer, Dr. C. E. Bulkley.

Dr. Bulkley has held office for nearly two years and resigned because of his removal to Winchester, Kansas. As a token of appreciation, the Society presented Dr. Bulkley with a gold watch charm engraved "Franklin County Medical Society—1916."

Dr. W. E. Michener of Ottawa was elected to fill the vacancy.

#### HARVEY COUNTY SOCIETY.

The following program was prepared for the November meeting of the Harvey County Society:

"Abortions," Dr. L. C. Axtell.

"Differential Diagnosis of Ectopic Gestation, Dr. Sophia Lee Cochran.

"Gleanings from the Journals," Drs. Abbe, Howard and Hertzler.

#### DECATUR-NORTON COUNTY SOCIETY.

The Decatur-Norton County Society met in Norton, Kansas, on Friday, November 3.

The following program was presented:

10:00 A. M.—Clinic, Lathrop Hospital.

12 M.—Luncheon.

1 P. M.—

"Appendicitis," Dr. C. W. Ward.

"Cholecystitis," Dr. O. M. Cassel.

"Hyperchlorhydria," Dr. J. L. Shewmaker.

"X-Ray in General Practice," Dr. W. E. Knox.

"Ectopic Pregnancy" (with case report), Dr. F. D. Kennedy.

3:00 P. M.—Football game, Clay Center H. S. vs. Norton County H. S.

6:00 P. M.—Dinner.

7:30 P. M.—Evening session, Round Table.

Business meeting.

#### MORRIS COUNTY SOCIETY.

The Morris County Society met in Council Grove, October 17. Dr. Chas. Mikula presented the paper of the evening on "Vasomotor Rhinitis."

A supper was given for those in attendance at the Cottage House.

#### WYANDOTTE COUNTY SOCIETY.

The Wyandotte County Society held its regular monthly meeting in the Commercial Club rooms, Tuesday evening, October 17. The program was as follows:

A clubfoot case showing results of non-operative treatment, was presented by Dr. Wilkinson. A paper, by Dr. Wilkinson, on "Some Difficulties in the Surgery of the Upper Abdomen." A paper by Dr. Fulton on "Anæsthesia."

At the meeting on October 31, clinical cases were presented by Dr. Barney, Dr. Lynch, Dr. Smith and others.

#### BOOKS.

International Clinics—Volume III of the Twenty-six Series.

A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia, with the collaboration of Chas. H. Mayo, M.D. Published by J. B. Lippincott Co., Philadelphia and London.

Among the subjects discussed in this volume of the Clinics we note a very exhaustive article on Gonorrhea in the Male, by Henry Tucker, M.D.; another one on The Treatment of Obesity, by B. B. Vincent Lyon, M.D.; and one on The Medical Uses of High Frequency Currents, by Dr. Frederick de Kraft.

Several very interesting papers presenting the advantages to be gained by the use of the X-ray in diagnosis of diseases of the chest are to be found in the section devoted to Diagnosis.

In the section on Pediatrics, Dr. Borden S. Veeder presents an article on Schick Test and its application. Several very interesting and instructive articles are to be found in the section on Surgery.

Like all of the volumes of the Clinics, this one is well illustrated.

#### How to Live.

Rules for healthful living based on modern science. By Irving Fischer, Professor of Political Economy, Yale University, and Eugene Lyman Fisk, M.D., Director of Hygiene of the Life Extension Institute. Eighth revised edition. Published by Funk & Wagnalls Company, New York. Price, \$1.00.

This book is authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extension

Institute, Inc. According to the author's preface the purpose of the book is "to spread knowledge of individual hygiene and thus to promote the aims of the Life Extension Institute. These may be summarized briefly as: (1) to provide the individual and the physician with the latest and best conclusions on individual hygiene; (2) to ascertain the exact and special needs of the individual through periodic health examinations; (3) to induce all persons who are found to be in need of medical attention to visit their physicians."

Other books have been written along these lines, but this is the first one that could be regarded as authentic. It is approved by those who hold the highest rank among the medical men of the country. The facts presented have been carefully verified and the advice that is given for the prevention of disease coincides with the latest and the best that is known.

#### The Medical Clinics of Chicago.

The Medical Clinics of Chicago, Volume II, No. 2 (September, 1916). Octavo of 197 pages, numerous illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.

In this number Dr. Charles Spencer Williams presents a case of Acute Miliary Tuberculosis and one of Syphilis of the Liver. Dr. Isaac Abt has a paper on Feeding the Normal Baby with Artificial Foods. Dr. Ralph C. Hamill presents the following cases: An Unusual Case of Multiple Sclerosis; External Ophthalmoplegia Due to Disease of the Pons; Progressive Muscular Atrophy Due to Syphilis; Beginning General Paresis.

From the clinic of Dr. Frederick Tice are reported a case of Carcinoma of the Head of the Pancreas and a case of Chronic Bronchitis, Emphysema, and Marked Cyanosis. Dr. Joseph Zeisler has an article on the Treatment of Acne. The clinic of Dr. Solomon Strouse, on Diabetes, is also reported. Dr. Joseph C. Friedman discusses Chronic Diarrhea, and Dr. M. M. Portis, Syphilis of the Stomach.

Pleurisy and Gastric Spasm; The Morphine Habit Subsequent to Lead Colic; A

Case of Myelogenous Leukemia; are reported from the clinic of Dr. Charles L. Mix.

#### Pharmacology and Therapeutics.

For students and practitioners of medicine, by Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics in the University of Pennsylvania; second vice-chairman of the Committee of Revision of the U. S. Pharmacopoeia. Second edition. Published by J. B. Lippincott Co., Philadelphia and London. Price, \$4.00.

A copy of the new second edition of this work has just reached us. Its publication has been delayed until the revision of the U. S. Pharmacopoeia was completed so that it might contain all the changes in legal standard. It is well to observe that the discussion of the various remedies is in no manner controlled by the statements of the Revision Committee. In regard to this the author says that while he "does not feel that he should surrender his judgment as to the importance of various remedies to that of the Committee on Revision, he does believe that official substances should always be favored by the physician when not to the detriment of the patient. Moreover, for obvious reasons, it is important that a text book for students should recognize the legal authority of the country on the subject of drugs. Therefore, while it has been deemed advisable to consider a number of unofficial drugs, because of their practical importance, it has also been necessary to include some substances of little remedial value because of their recognition by the Pharmacopoeia."

About twenty substances that were not considered in the former edition have been given a place in this one.

#### The Practical Medicine Series.

Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Price of series, \$10. The Year Book Publishing Co., 327 So. LaSalle St., Chicago, Ill.

Volume VI, General Medicine: Edited by Frank Billings, M.S., M.D., head of the medical department and dean of the faculty of Rush Medical College; assisted by Burrell C. Raulston, A.B., M.D., resident pathologist, Presbyterian Hospital. Price of this volume, \$1.50.

Please note that the present volume is one of a series of ten issued at about monthly intervals, and covering the entire



field of medicine and surgery. Each volume being complete on the subject of which it treats for the year prior to its publication.

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### **New and Nonofficial Remedies.**

**Barium Sulphate for Roentgen Ray Work.**—Barium sulphate freed from soluble barium salts. This salt passes through the system unchanged and, because of this, is used in taking Roentgen Ray pictures of the stomach and the intestines.

**Barium Sulphate-Squibb for Roentgen Ray Work.**—A brand complying with the standards for barium sulphate for Roentgen Ray work, N.N.R. E. R. Squibbs & Sons, New York. (Jour. A.M.A., October 7, 1916, p. 1091.)

**Chlorazene Tablets, 4.6 Gr.**—Each tablet contains 4.6 grains chlorazene (sodium paratoluenesulphochloramine). The Abbott Laboratories, Chicago. (Jour. A. M. A., October 7, 1916, p. 1229.)

—————R—————

### **Treatment of Drug Addicts.**

The non-secret treatment for narcotics, which was published in the Journal of the A. M. A. some time ago, is being used at Hygie Hospital. The superintendent of the hospital states that he is getting the highest per cent of fixed results. "This treatment, in addition to separating the user from his habit, dissociates the habit from the mind and body of the individual, thus obliterating the craving. The treatment is of short duration and the discomfort minimized."

On entrance to the hospital a fixed charge is made, covering all ordinary expenses. The charge is moderate considering the service rendered in each individual case. The superintendent will be glad to furnish reprints and reports of cases treated to those who are interested.

—————R—————

### **Diphtheria Antitoxin—Whose?**

"What make of diphtheria antitoxin shall I employ?" is a query that comes sooner or later to practically every physician. It

is a question that should not be answered "offhand." On the contrary, it merits the most thoughtful consideration. Obviously, all antidiphtheric sera are not of equal merit. The antitoxin selected should be a product of established purity and potency—an antitoxin backed by experience, scientific knowledge and adequate manufacturing equipment. A name that comes promptly to mind in this connection is that of Parke, Davis & Co., among the earliest and for many years the largest producers of diphtheria antitoxin. That these manufacturers regard the business of serum production as one not only worthy of the highest skill and endeavor, but actually demanding it, is evident from this excerpt from one of their recent announcements:

"When, in 1894, we undertook the manufacture of diphtheria antitoxin, we had one dominant ambition: to produce an antitoxin that should leave nothing to be desired—an antitoxin that the physician might administer at a critical moment with assurance that it would not fail him. In all the years that have since elapsed we have never once lost sight of that ideal. Diphtheria antitoxin that is carefully, scientifically, conscientiously made demands a large expenditure of time and money. The cost is amply justified. The value of a human life cannot be measured in dollars and cents. We produce the best possible antitoxin, and we spare no expense in doing it."

—————R—————

### **Propaganda for Reform.**

**Hydras.**—The Council on Pharmacy and Chemistry reports that Hydras, sold by John Wyeth & Bro., is one of the so-called "uterine tonics," said to contain "cramp bark, helonias root, hydrastis, scutellaria, dogwood and aromatics" in unspecified amounts. While the name, taken in connection with the composition, suggests that hydrastis is an important constituent, the A.M.A. Chemical Laboratory found this drug to be present in unimportant amounts. The Council finds Hydras inadmissible to New and Nonofficial Remedies because its

composition is semi-secret; because the recommendations on the label for its use in specified diseases, and the advertising accompanying the bottle are sure to lead to its ill-advised use by the public; because the claims made for its curative properties are exaggerated and unwarranted; because the name is misleading and because the combination of these five drugs, even if individually they were of therapeutic value, is irrational. (Jour. A.M.A., October 7, 1916, p. 1107.)

Nuxated Iron.—Nuxated Iron is advertised in newspapers with the claim that it is not a patent medicine or secret remedy. In the popular meaning of the words, "Nuxated Iron" is just as much a "patent medicine" as is "Peruna," "Lydia Pinkham's" or "Pierce's Favorite Prescription." Also, "Nuxated Iron" is essentially secret in composition. While the public is led to believe that the preparation consists chiefly of nux vomica and iron, analyses made in the A.M.A. Chemical Laboratory and elsewhere indicate that it contains much less than an ordinary dose of iron and practically no nux vomica. It is sold under claims that are both directly and inferentially false and misleading not only as regards its composition but also as regards its alleged therapeutic effects. Nuxated Iron is also advertised in the Medical Brief, a publication which has for its editor the "medical expert" for the Wine of Cardui concern in the recent case against the American Medical Association and as its publisher one who, through the "National Druggist," has long been the mouthpiece of the "patent medicine" interests. (Jour. A.M.A., October 21, 1916, p. 1244.)

#### WANTED—FOR SALE—ETC.

FOR SALE OR TRADE—Betz 24-Plate Static Machine and Salvanie Wall Plate, made for batteries, dry cells. Will sell cheap for cash or will trade for Ophthalmometer, motorcycle, automobile, or anything else I can use or amuse myself with. French M. Smith, Lyndon, Kansas.

#### STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.

Required by the Act of Congress of August 24, 1912, of the Journal of the Kansas Medical Society Published Monthly at Topeka, Kansas, for October, 1916. State of Kansas, County of Shawnee, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared W. E. McVey, who, having been duly sworn according to law, deposes and says that he is the editor of the Journal of the Kansas Medical Society and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Post Office Address  
 Publisher—W. E. McVey, under direction of the Council of the Kansas Medical Society .....Topeka, Kansas  
 Editor—W. E. McVey .....Topeka, Kansas  
 Managing Editor—None.  
 Business Manager—None.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Kansas Medical Society, Dr. Jas. W. May, Kansas City, Kansas, President; Dr. Chas. S. Huffman, Columbus, Kansas, Secretary; Dr. L. H. Munn, Topeka, Kansas, Treasurer.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only).

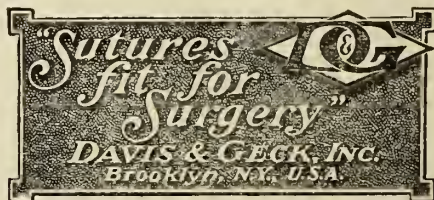
W. E. McVEY, Editor.

Sworn to and subscriber before me this 25th day of September, 1916.

(Seal)

L. GANDRY,  
 Notary Public.

(My commission expires October 20, 1917.)





# THE JOURNAL

*of The*

## Kansas Medical Society

Vol. XVI

TOPEKA, KANSAS, DECEMBER, 1916

No. 12

### So-Called Chronic Gastro-Intestinal Indigestion—A Plea for Careful Diagnosis.

By F. C. BOGGS, M.D., Waverly, Kansas.

Read before the Kansas Medical Society at Topeka, Kansas, May 3-5, 1916.

The writer realizes that the above subject is one far too vast to be treated in detail in so short a paper. The various phases of this most common complaint would each in itself be a suitable subject for a discussion of some length. The excuse for presenting it at all in this way is the hope that a review of a few general facts which are believed to be true may not be out of place at this time, and may lead to more care and greater effort in diagnosing the basic trouble in, and in treating, these cases coming ordinarily first to the general practitioner.

The term chronic gastro-intestinal indigestion is a vague one, usually applied to a great number of gastro-intestinal symptoms which are caused by various pathological conditions of the intestinal tract or organs in proximity to it. For the purpose of this paper I wish to use in conjunction with the term chronic-gastro-intestinal indigestion the synonymously-used terms, dyspepsia and catarrh of the stomach and bowels.

During the past few years in general practice, by far the greater percentage of chronic patients presenting themselves for treatment at my office have complained of symptoms suggestive of classification under the subject of this discussion—pain before or after eating, gas and abdominal

distension, constipation, intestinal stasis, with its toxic and reflex symptoms, tachycardia, vomiting, diarrhea, mucous stools, abdominal tenderness, together with the accompanying neurasthenic symptoms which are too lengthy to enumerate.

For the purpose of differentiation I will mention the occurrence of the acute catarrhal inflammation of the intestinal tract, the acute indigestion, brought about by dietetic error or functional abnormality, nervous in origin. This condition is transient and generally there will be an early return to normal, with or without medical assistance. On the other hand I wish to offer the assertion that whenever you find a condition of chronic indigestion giving symptoms such as given above, persisting for weeks and months or possibly years, you have to deal with a pathological condition usually infectious in character and ordinarily found within the peritoneal cavity. Not always, however, as will be mentioned later.

I am aware that in spite of modern laboratory methods and careful clinical examination it is often very difficult and sometimes impossible to correctly accuse the guilty offender. It is better, however, to make a mistake than to shirk the responsibility with an alkaline prescription and a meaningless diagnosis.

The appendix is perhaps the most frequent cause of a condition of chronic-gastro-intestinal indigestion or catarrh. I use the word catarrh because it is one so often heard to describe any intestinal irritation or irregularity. I shall consider in this paper only the chronic appendix

briefly. Most of these cases have had an acute attack—some of them do not give such a history. Perhaps it has been overlooked by the patient, or occurred so long ago that he has forgotten it. Perhaps a good many of them never have had an acute attack. Most of them have pain in the abdomen at some time after eating, it may be irregularly intermittent. There is occasionally the case which does not have pain nor even definite tenderness over McBurney's point. The large dilated appendix, the mucosa of which is infected, and the muscularis of which is not destroyed, will sometimes give no sign excepting a chronic colitis which cannot get well on account of the constantly discharging appendix. These chronic appendices will sometimes cause the greatest pain in the region of the descending colon or sigmoid, due to a spastic contraction of that organ in those regions, reflex in etiology. The average case, however, gives us a gastric hypermotility with hyperacidity and pain. This condition hurries the improperly prepared food into the intestinal tract and fermentation with gas and distension are the results. Stasis usually occurs and is responsible for the toxemias which accompany these cases.

Next to the appendix perhaps the gall-bladder is most often the cause of intestinal or abdominal symptoms as above mentioned. Many of these cases are typical when first seen and easily diagnosed. A considerable number give rise to intestinal derangement with its train of co-existent ill health which may require exploratory operation to definitely settle the diagnosis. It should at least be possible to decide that the trouble is abdominal and the treatment surgical. You have all seen cases of so-called neuralgia of the stomach or dyspepsia, which have persisted for years, die from perforation. And this is what almost invariably happens to them if allowed to continue and they do not die from some other disease. We do not always find jaundice accompanying these cases of cholecystitis to give us the key to diagnosis. Those cases which are diffi-

cult of diagnosis are the ones which do not have a complete obstruction of the common duct and for this reason we do not have jaundice.

Then in order, or perhaps with equal frequency, come the gastric and duodenal ulcers and the malignancies of these organs. These cases are perhaps longest treated as chronic indigestions with alkaline medication and regulation of diet. There is a fairly large percentage of small beginning ulcers which may be cured temporarily medically. Perhaps some of these cases are permanent. A great many I am sure recur at intervals and eventually become malignant in later years. Malignancies of the stomach and duodenum too often reach the inoperable stage under the disguise of a careless diagnosis of stomach trouble or indigestion.

The malignancies and new growths of the lower intestinal tract most often make themselves first known through slight obstructive symptoms—constipation alternating with diarrhea, pain and gas. In cases with these symptoms persistently occurring the possibility of malignancy should be ruled out. If it cannot be, exploratory operation would be the safest procedure for the patient.

We are beginning to look in the mouth, nose and throat of the patient who comes to us complaining of intestinal symptoms, vague as to cause. Pyorrhea alveolaris when existing to any degree of severity is a disease which makes it absolutely impossible for the patient possessing it to be free from intestinal trouble. Sinus and tonsillar infection have not seemed to me to cause so often direct infection of intestinal mucosa. I have had a number of cases to clear up as promptly after the extracting of the teeth in pyorrhea as one will after the removal of a chronically infected appendix. There is very little excuse to overlook this condition, for the odor of the breath is usually enough to lead to a suspicion of the cause of trouble.

The anatomical displacement of viscera has received considerable attention of late, and undoubtedly a great deal remains to



be learned before we will be properly informed as to the degree of trouble for which these various ptoses and misplacements are responsible. Also the proper treatment is still a matter for discussion and conclusion. However, as a point of diagnosis these conditions must be borne in mind. Properly executed roentgenograms with proper interpretation will often explain certain cases of intestinal disturbance with stasis and its secondary train of toxemias. Diet and proper management will no doubt result in improvement in a large number of such conditions.

A condition which very often gives its first noticeable symptom to the patient through intestinal indigestion is that of myocardial weakness with its resulting congestion in the liver, stomach and hollow viscera. Many of these cases which are fully compensated still give a train of symptoms abdominal in character that should lead to the discovery of the probable source of trouble. These patients often complain of their inability to eat heartily or partake freely of large quantities of liquids. They become constipated when on a generous diet, having considerable gas and distension. Dyspnea at these times is noticed. The case with broken compensation is not apt to be overlooked. You are all familiar with the hyper-acidity and the gastric irritability accompanying these latter.

There are a number of pathological conditions outside of the gastro-intestinal tract which affect those organs in a reflex manner. I wish to mention but one of them on account of its very common occurrence. Pulmonary tuberculosis, it should be remembered, very often gives its first alarm to the patient affected through irregularity of the digestive tract. These cases complain of pain after eating, flatulence and constipation, all of which are reflex through the pneumogastric. Pottenger of California, I believe, mentions the occurrence of intestinal upset at regular intervals of about two weeks. It is all important that the physician who first

sees these cases should be alert and make a probable diagnosis where an early diagnosis is so important to the welfare of the patient.

There are a good many other diseases which give rise to gastro-intestinal disturbance with indigestion. I have purposely neglected to take up the various pelvic abnormalities and infections in the female. These cases give rise to abdominal symptoms both reflex and mechanical. They are not overlooked so many times as some of the conditions which have just been taken up. For this reason I shall merely mention them in passing. The conditions which have been taken up are the most common ones and are those which must be looked for every day in the treatment of chronic ambulatory patients.

I have not gone into these different conditions completely, nor taken up at all a good many which would be interesting were there more time for such. Such was not my intention in this paper. I have merely endeavored to call your attention to a few points of diagnosis which are so often overlooked, not from lack of knowledge, but from lack of careful examination and consideration in this class of cases which comes so frequently as to become monotonous. We as physicians owe each of them a careful examination and diagnosis with proper advice as to treatment. There is no excuse for the diagnosis of chronic indigestion, dyspepsia and catarrh of the stomach and bowels.

—R—

### **A Foul Breath Causes Other than Dental Caries.**

By JOHN H. JOHNSON, M.D., Coffeyville,  
Kansas.

Read before the Kansas Medical Society, at Topeka, Kan.,  
May 3-5, 1916.

The time of the crusade and the crusader is not a matter of history alone, but we live in the age when the dentist and physician are the leaders and beginners of the greatest crusade which the world has ever witnessed or ever shall witness—the crusade against disease. The dentist and

physician are each an important link in the chain which preventive medicine is binding about disease.

The rhinologist and laryngologist above all other physicians is the one most intimately associated with the dentist, as the results obtained by one are frequently dependent upon the aid and assistance of the other. This is especially true in overcoming a foul breath.

A foul breath is an indicator which directs the attention of friends and associates as well as the dentist, laryngologist, and physician, to a signboard of disease or a breeding place of discomfort, sickness, and even death. A foul odor will cause a contortion of the facial muscles which gives the face of the recipient of the odor the expression that signifies a feeling of disgust. For this reason people with a bad breath are much handicapped in their associations with society in business or pleasure. People shun those with a foul breath, both consciously and unconsciously.

"Foulness of the breath is met with in five groups of conditions:

"1. Septic and putrefactive changes within the nose and mouth;

"2. Septic and putrefactive changes within the lungs;

"3. Ingestion of certain substances such as tobacco smoke, garlic, onions, spirits, whose products are excreted by the lungs and saliva;

"4. Septic and putrefactive changes in the stomach and intestines;

"5. Severe toxic condition."

It is impossible to give a complete list of all the causes of a foul breath in the time allotted to me, and I shall therefore endeavor to take up the more important causes.

The causes producing a foul breath from conditions of the nose are classified under the term, *ozena*. All the early writers undoubtedly use the term, *ozena*, to cover all intranasal disease attended with odor, whether syphilitic or simple *ozena*. *Ozena* is really a peculiar diffused disease of the nasal mucosa, which is characterized by the production of a thick, specific, highly

offensive secretion with a tendency to the formation of flakes and crusts, and attended by atrophy of the mucosa.

The foul odor from a foul mouth or diseased gums is quite distinct from that of decayed teeth. Decaying food and debris around the teeth quite frequently is the cause of a foul breath. The dirty, fetid mouth destroys the appetite as well as makes a repulsive breath. It too frequently happens that a child or patient of an anæmic appearance, with coated tongue and fetid breath, too often gets a dose of calomel instead of having the cause removed, a foul mouth and dirty teeth.

Tartar, septic gums, pyorrhea alveolaris, syphilis and mercurial stomatitis and such conditions produce a foul breath. Other mineral poisons besides mercury produce a stomatitis with its accompanying fetor, which may be very pronounced. Bismuth poisoning will produce a similar condition, while phosphorus produces a periostitis that may later involve the mucous membrane. Many cases attributed to lead poisoning are due mainly if not wholly to a foul mouth condition.

Noma, or Cancrum Oris, is a gangrenous stomatitis. According to Green of New York it is caused by the germ of Vincent's angina and should be treated with trichloroacetic acid full strength after the surface has been deadened with novocain. If the odor is very bad, use irrigation with permanganate solution. The diagnosis of Vincent's angina is made from the smear. Vincent's angina may attack any part of the mucosa of the mouth and throat. It usually occurs between the ages of two and twenty-five years. It is due to the fusiform bacilli and spirilla of Vincent. After the inflammatory stage begins in Vincent's angina, a granular or cheesy pseudo-membrane is formed which has a great deal of resemblance to that caused by diphtheria bacillus and may be confused with diphtheria and even syphilis. Later stages show a distinct ulceration, at which time the foul breath is most pronounced.

In scurvy the gums become swollen,



spongy, and detached from the teeth, beyond which they project in loose purplish masses that sometimes ulcerate. The teeth become loose and the breath is fetid.

Dentists in their routine examinations of the mouth, other than the teeth and gums, to find the cause of a bad breath, as a rule simply inspect the tip of the tongue and dismiss the case with the remark: "You have a bad stomach; take a physic and you will be all right in a few days." The proper examination of the mouth should be made with a spatula or tongue depressor, and with a good light. The proper inspection of the mouth should include the tongue, the fauces, the tonsils, the naso-pharynx, the inner surface of the cheeks, the lips, the gums, and the teeth. The dentist, if he does not care to look further than the teeth and gums for the cause of a bad breath, should refer the case to a competent laryngologist to complete the examination.

Septic conditions affecting the bronchial tubes and lungs produce a foul breath. In bronchitis or pneumonia the breath is frequently foul. The odor of the breath has some importance, especially in tuberculosis. It may be fouler than the sputum in the cup. The sputum when fresh has almost no odor, but when it is allowed to stand a very positive odor is given off. The odor of phthisis is about the same in all individuals, especially during the later stages of the disease. In tuberculosis and bronchiectasis the odor of the breath is heavy, sweet, and penetrating; in perforating empyema, like that of old cheese; in pulmonary gangrene it has the worst odor of all.

In the eruptive diseases of childhood the breath is foul, as in scarlet fever, measles, etc. The breath in scarlet fever has a heavy, sweet odor. The odor from the breath in smallpox, according to some, is a sickish odor, like the odor of sweet potatoes. The diagnosis of diphtheria has been made alone on the odor of the breath.

"In typhoid fever, too, one obtains early diagnostic information in the mouth from the so-called Bouveret ulcers, which ap-

pear as early as the seventh or tenth day of the disease. These ulcers are usually symmetrically placed on either side of the fauces just above and at the outer side of the tonsils. Rarely they are found on the uvula or at the junction of the hard and soft palate. They are kidney-shaped, the concavity being toward the median line. They vary in size, but are usually about one-half to three-quarters of an inch in length and one-third of an inch in breadth. They are usually covered with a grayish slough. They represent an infiltration of the lymphoid tissue in the fauces which forms ulcers which are homologues of the ulcers in the lymphoid tissue of the Peyer's patches in the intestine. Their appearance is absolutely characteristic and once seen they cannot fail to be recognized."

"Their occurrence is not so very infrequent, according to Blum in from five to ten per cent of all cases. The breath in typhoid is generally foul. The odor is rather sharp, 'a semi-cadaverous musty' odor, as Nathan Smith says.

In diabetes mellitus we have the sweet odor of the breath sometimes called 'the acetone breath.' This is a fairly constant symptom and once recognized will always be appreciated." A foul breath may be caused by dyspepsia or indigestion as well as any of the other toxic conditions affecting the alimentary canal. In children gastro-intestinal conditions produce a sour-smelling breath. In severe toxic conditions affecting the peritoneum the odor of the breath is foul, and this condition also obtains in intestinal obstruction.

Conditions of the uterus and its appendages are frequently the cause of a foul breath. Girls and young women during menstruation give out an odor from the breath quite distinct from that of the menstrual fluid. So marked is this odor in some patients that they refuse to consult a dentist or physician during the menstrual period. A dead fetus in the uterus produces a fetid breath (King). Also in postpuerperal sepsis the breath is very foul.

In remote septic conditions the breath may be foul. One observer has noticed an odor in the breath of patients suffering with an ulcer of the cornea. In septic thrombosis of the sigmoid sinuses following otitis media the pulmonary symptoms are accompanied by expectoration streaked with blood or having a "prune juice" character, giving forth in some cases a fetid or even gangrenous odor.

All septic or gangrenous conditions of the mouth, throat, etc., are associated with a foul breath. Anthrax, tuberculosis, actinomycosis, leprosy, etc., of the mouth and throat have a foul breath. The gangrene accompanying carcinoma produces an offensive breath. A foul breath results if the mouth is not vigorously taken care of in acute suppurative inflammation of the submaxillary and sublingual glands in young infants.

The most important condition which produces a chronic foul breath is diseased tonsillar crypts, a condition so frequently overlooked by dentists and physicians in their examination of the mouth for the cause of a foul breath.

The etiology of diseased tonsillar crypts cannot be ascribed to any one factor more than another, as the condition results from various causes. The predisposing causes are enlarged crypts, low bodily vitality from any disease, and especially those of infectious nature, as diphtheria, scarlet fever, influenza, tuberculosis, etc. The liability to follicular tonsillitis increases with repetition of the attacks. The exciting causes of acute diseased follicles are infection with such organisms as the staphylococcus, streptococcus, pneumococcus, bacillus coli communis, bacillus typhosus, fusiform bacilli, spirilla, etc. The germs that are present in chronic diseased crypts are often excited into action by exposure to cold or by exhausting work. New and strange organisms are constantly brought to the tonsils in the food. In the spring of 1913 a remarkable epidemic of virulent tonsillitis occurred in Boston and vicinity, in which its source was indisputably traced to a model dairy. Cotterill recorded an

epidemic of follicular tonsillitis in a boys' school, which he traced to milk from cows with diseased udders. In the healthy human mouth the flora includes more than one hundred different organisms, and it is not strange that the tonsillar crypts are in a constant state of siege and that sometimes the enemy breaks down the barriers.

The subjective symptoms of diseased tonsillar crypts vary in different individuals, there may be none whatever or they may be of pronounced character. There is a sensation of fullness in the throat in the region of the tonsils, or tenderness. Deglutition may be attended with discomfort or pain. Sometimes the complaint is of an inconvenience or even a pricking sensation in the throat which is especially marked during deglutition. Patients and their friends often notice that the breath is foul in the extreme; they attribute this to a bad stomach when the sole cause is in the tonsillar crypts. A characteristic symptom is the expulsion of yellowish gray cheesy masses on coughing. These caseous plugs vary in size and are extremely fetid. Sometimes the only discomfort in cases of diseased crypts is a reflex pain in the ears, or the patient complains of the nose being stopped up.

Diseased tonsillar crypts are common in childhood, and the condition is probably not so rare in early infancy as was formerly supposed. In febrile disturbances in infancy and childhood the tonsils should be examined closely and the crypts or follicles should not be overlooked. In adults, diseased follicles constitute undoubtedly the most frequent diseases of the tonsil.

Often an attack of acute inflammation of the crypts in children sets in with a chill or convulsion. The temperature ranges from 101 to 105 deg. F. (38.5 to 40.5 deg. C.), with the usual constitutional symptoms. Constipation is frequent, but in babies diarrhea with green stools may quickly follow, thus leading to the diagnosis of gastroenteritis, when the true cause lies in the tonsillar crypts. In adults and adolescents the general symptoms are malaise or chilliness, fever



(which may be remittent in character), headache, myalgia, etc., with tenderness of the muscles of the neck; the cervical glands and tonsils show signs of congestion, the tongue is coated and the breath foul.

All acute inflammatory conditions of crypts or lacuna are described under the name of acute lacunar croupous tonsillitis (Bosworth), or acute follicular tonsillitis, called by the laity "ulcerated sore throat." This condition is characterized by the filling up of the crypts with inflammatory products. This caseous deposit, the first local sign of follicular tonsillitis, is white, gray, or yellowish-white in color. In young children it appears as fine spots which are hardly visible and often escape observation. These "exudative spots project slightly from the surface of the tonsil and represent the visible portion of the inflammatory debris with which the crypts are distended."

The pyoid masses derived from the crypts vary in size from a gooseberry seed to a small cherry and even larger. The caseous balls or masses are made up of exfoliated epithelium, particles of food, large numbers of lymphocytes of all sizes, long segmental fungi, leptothrix bacillus, various streptococci, staphylococci, less commonly the pneumococcus, the micrococcus catarrhalis, bacillus coli communis, bacillus of Friedlander, bacillus septicæmiæ sputi, in a few isolated instances the micrococcus tetragenus, and exudative lymph with possibly a little fibrin; the masses vary from semi-solid in acute follicular tonsillitis to "cheesy" consistency in chronic cases.

The symptoms of chronic follicular tonsillitis are largely those of the acute form. The most pronounced symptoms of chronic diseased crypts are an almost constant foul breath, the coughing up of fetid cheesy masses, pharyngeal and nasal catarrh, and frequent attacks of sore throat.

The diagnosis depends on finding the plugs in the crypts, or the inflamed crypts which contained them. The crypts may coalesce to form large lacunæ. In children follicular tonsillitis is apt to be confused

with diphtheria, and the latter should be suspected until disproved by the culture test. The diagnosis may be difficult when the crypts are sac-like with narrow openings, or when their contents have become encysted.

Inflamed and edematous pillars, uvula, and soft palate are often the result of diseased tonsillar crypts, which may also serve as a starting point for ulcers. The septic material absorbed through the crypts may cause enlargement and tenderness in the lymphatic glands of the neck and at the lower jaw. Peritonsillar abscesses originate from diseased crypts and they are sometimes evacuated through them. Damaged lacunæ of the tonsil are among the most common portals of entry for the invasion of bacteria to be found in the body, and it is no wonder that a host of acute and sometimes very severe inflammations of the serous membranes arise in this manner as the result of a cryptogenetic septicopyemia. Pneumonia has been observed following lacunar inflammation in a number of instances (Grunwald). The swallowing of the plugs of fetid matter often results in a condition termed "biliousness," the stomach receiving the blame for a diseased condition of the tonsils. Catarrh of the nose, accessory sinuses and nasopharynx may originate from diseased tonsillar crypts. The catarrhal secretion coming from them is often filthy in the extreme. This infectious matter constantly bathes the oropharynx; naturally the teeth are exposed to infection from this source, thus favoring caries or decay.

One of the most important conditions of tonsillar disease, which gives the patient great anxiety, is tuberculosis. In tubercular adenitis of the neck it is the tonsil that is almost invariably the first to become affected, the infection travelling from the crypts to the cervical and the bronchial glands. Several investigators have found tubercle bacilli in the crypts of the tonsils. The tubercular process develops mainly in the cavity of the crypts; the ulceration does not as a rule come to

the surface at all. The bacilli are sometimes present in large quantities (Kafeman). "The tonsillar tissue of the throat, because of its peculiar anatomic construction and its topographical relations, is more liable to become infected by tuberculosis than any other part of the upper respiratory tract" (Wood). Tubercular infection through the crypts gains access to the lymphatics, then to the blood stream, sometimes becoming scattered and producing miliary tuberculosis. Dr. Towler of Brooklyn reports a series of twenty-one experiments where the cheesy fetid material expressed from tonsils was injected into guinea pigs. Fourteen pigs developed tuberculosis. It is the opinion of quite a number of laryngologists that in tuberculosis of the apex of the lungs infection gains access through the tonsil.

There are a number of cases on record of tuberculosis of the tonsils prior to the involvement of the lungs, or the lungs may be involved first and the tonsillar tissue become infected later. Patients having no tubercular lesions but diseased tonsillar crypts may, as a result of irritating emanations, suffer from congestion and obstruction of the nose interfering with free respiration, and through undue mouth breathing, expose themselves to tubercular infection by inhaling tubercle-laden dust. It is the diseased tonsillar crypts that predispose patients to tuberculosis. Thus in a case of fissured or partially destroyed tubercular tonsil the general symptoms of incipient tuberculosis may disappear through removal of all crypts, with speedy restoration of the individual's health.

If diseased crypts are left in the throat, recurrence of inflammation will always follow, and foul breath persist in spite of mouth washes and gargles. The treatment of the gums or the filling of the teeth will not remove a foul breath, due to diseased tonsillar crypts.

This paper will not have been in vain if I have succeeded in creating an added interest to the importance of a complete examination of all the structures from which a foul breath may result.

### Minor Emergency Surgery.

By N. C. SPEER, M.D., Osawatometie, Kan.

Read before the Miami County Medical Society, October, 1916.

For nearly ten years I have been employed by the hospital department of the Missouri Pacific Railroad, at Osawatometie. In consequence I have developed a technic in minor surgery, in order to handle this work as expeditiously as possible, and at the same time give the best service. A practice of this kind calls for rapid results, as time is an important element to the patient himself and to his employer, the railroad company. All clamor for an early convalescence and for a functional result, either of which is endangered by infection or by granulating wounds. Minor surgery in the railroad work differs from ordinary practice in that the wounds are usually received with more violence. The contusions are severe, abrasions are extensive and burns are deep.

The most frequent injury with which I have to deal is that of a foreign body in the eye. The particle usually locates on the cornea, and in nearly half the cases has struck the eye while hot. These burns cause a scar resembling a wheel to form at once. Curiously enough these corneal injuries often cause little discomfort until the patient tries to sleep, then the eye lid, closing tightly over the cornea, rubs upon the foreign body and causes pain. Under such conditions the eye often develops an ulcer because it becomes infected. As an anesthetic in these eye cases I use 4 per cent cocaine, and if congestion obscures the field I use adrenalin. As an aid in detecting the disturbing particle I use a magnifying glass, such as is used commonly by jewelers, wearing it like a monocle. In many troublesome cases the foreign object is very small and requires a transverse light for its detection. I find that a sharp pointed knife is better than an eye spud and I have tried the latter thoroughly. A dictum to follow—"have the knife surgically clean." It is not well to cover the injured eye—open air discourages infection and encourages recovery



by its tonic effect. I frequently use 2 per cent atropine solution in patients under forty; it relieves optic spasm and is indicated if there is an ulcer.

Contusions come next in the order of frequency, and that most often in the form of injured nails. Some deep muscular contusions require surgical treatment, these being the ones that have concealed hemorrhage, developing clots. Removal by incision is indicated, otherwise they are very tedious and cause widespread metastasis in the tissue as evidenced by the discoloration. If the nails of the great toe and thumb are severely bruised I advise early removal, for if the blood has accumulated under them it causes as much pain as any minor injury I know. It gives a rich culture ground for infection that is difficult to control unless drainage is freely given. In addition they are very prone to excessive granulations if the nail is partially displaced. •

It would be presumptuous to discuss punctures at length in this day of antiseptics when so much stress is laid on the Fourth of July tetanus. In my office I drain every nail puncture of whatever magnitude, and change the dressing daily. If it is a ragged wound that cannot be opened effectually, antitetanic serum is given or advised in every case. I gave it to my own son in such a case. I consistently inject this serum for extensive ragged wounds, received while the men are working about the stock cars, stock yards, or where there is fresh earth—unless these wounds can certainly be cleansed and drained.

Lacerations, as all breaks in tissues I treat, are cleansed by tincture of iodine, no water reaching the wound. The surface beyond is cleansed with gasoline or soap suds as seems most practical. These wounds are closed and rarely redressed for seven days, unless hemorrhage soils the dressing or pain develops, then I explore. A comforting fact to relate is that I have not had an infected scalp wound since I have systematically used iodine, and I do not shave extensively. Chronic

catgut is the suture used. It has many advantages.

Many fractures of the phalanges present themselves in such an office as mine, and for the satisfaction of all concerned many of these suspicious cases are given X-ray exposures, the results have been surprising to me. A rather painful finger is usually broken, possibly a partial fracture. The same is true of rib injuries. I also saw a partial tibial fracture that cleared up the mystery of the patient's continual complaining of pain over his shin. The ribs are strapped in most instances and if they are no longer painful, many return to work. Fingers are supported by two strips of very thin pine sticks, usually made from a tongue depressor. These splints are cut to fit the angles of the fingers and are strapped with three narrow strips of adhesive, no gauze entering into the dressing. If such precautions are taken the so-called "baseball" fingers are no longer shown to you a week after injury.

Burns and abrasions come next in frequency and are treated much alike; *i. e.*, by cleanliness and rest. Superficial abrasions and burns of the first, second and third degrees are dressed with gauze saturated with campherol and are changed at long intervals. In certain cases, especially the anterior tibial region, the open air treatment is good. To accomplish this I construct a cofferdam of gauze around the wounds, fasten it securely by adhesive in order to get rest for the lesion and stability in the dressing. Over this area I stretch one layer of gauze, with instructions to the patient to expose it to the sun as much as is convenient.

Sprains of many locations and degrees prevail with railroad men. The sprained back is a byword and a bugbear to claim agents for accident companies, insurance companies and the railroad companies. If anyone could discover some method of determining accurately the severity of these back injuries he would be famous at once. For such injuries I apply a seven-inch belladonna plaster, twelve inches in length,

transversely across the back, and in some severe cases two strips of three-inch adhesive plaster are applied from the ribs down to the pelvic rim on each side of the vertebral column.

Sprained ankles are quite common and are very satisfactorily treated by the adhesive strip method. One-inch strips of adhesive are applied alternately around the ankle from below upward, and from the back forward and continued up to above the malleoli on the side until the dorsal surface of the foot is covered. This bandage prevents the exudation of fluids into the ankle tissues and retains the torn fibers in place. By doing these two things it prevents pain and insures a strong ankle in the end. It is a fact that ankles so treated do not have pain and do not swell. It is also the case that these patients can often continue at work and in the end be perfectly well. This operation is the most satisfactory I do.

Infected wounds especially of the fingers are common. Any infection of the extremities I treat by the Bier method, using a homely system as follows: A small rubber band is placed around the finger, proximal to the hand, snugly tight, and a piece of web elastic, conveniently from a supporter or a suspender, about the forearm just tight enough to feel that it is there. The bands are left from six to twelve hours, with occasional relaxation. I have found that a wet compress of bichloride 1:5000 is superior to other dressing, and that an incision with gauze drainage is necessary even if there is no evidence of abscess formation. Some finger cases are osteomyelitis and require an incision through the periosteum early, to preserve the bone.

Anesthetics play an important part in minor surgery. Ninety-five per cent phenol introduced into a small punctured wound makes sufficient anesthesia to make it possible to insert drainage without pain. An ethyl chloride spray is of use for very sensitive patients, but as a local anesthetic I believe it is not a success, for the reason that when the frozen tissues begin to thaw

the pain is pronounced. I mention that it is useful for sensitive patients because it is possible to get them to permit you to operate when otherwise they would not.

Cocain locally applied gives good anesthesia for the eye. Novocain is the local anesthetic to be used hypodermically and can be used almost ad libitum. In the wound that it is desired to relieve for a long time quinine and urea is the anesthetic of choice. It is possible to get anesthesia for a night in some instances, whereas the patient would not be relieved without morphine except by excessive dosage. I have had patients with indurated abscesses that were very painful, that could have comfort as long as twelve hours when this was used. A general anesthetic is advisable for fractures of doubtful nature, especially the Colles type.

I do not claim originality in this paper. The ideas are the product of an effort to standardize the treatment of the so-called little stuff. I try to adhere closely to standard methods of treatment, even in minor surgery.

—R—

### Acidosis.

By W. T. BROWN, M.D., Williamsburg,  
Kansas.

Read before the Franklin County Medical Society, June, 1916.

This subject has as yet received but scant attention in the text books, and the articles in the current periodicals deal mostly with some particular aspect of the subject. While all admit its importance, no one as yet knows just what this condition really is. But it now is, and undoubtedly will continue to be for some time, the center of a great deal of investigation. In view of these facts I thought perhaps a general survey or review of the observations on this subject might be of interest to the Society.

Acidosis is characterized by a decreased alkalinity of the blood, a condition due to the formation and accumulation of acids in the body under morbid conditions, such as diabetes, cancer, prolonged vomiting, diarrhea, starvation, starch-free diet, and



in the termination of many acute and chronic diseases. It is marked by the presence of the acetone bodies in the urine (the so-called "ketonuria"), or urinary evidence of abnormal production of other acids, by lowering of the bicarbonate content of the blood, and by certain characteristic symptoms.

The part which acidosis plays in the terminal symptoms of acute and chronic disease is often not recognized. It has long been known that acidosis is the cause of diabetic coma, but that this serious condition often occurs in acute disease when there is prolonged vomiting and starvation or when the diet is for a long time starch free, is not always known or the occurrence guarded against.

At the Battle Creek Sanitarium over 2,000 determinations of acidosis have been made by the alveolar air method and they have reported their conclusions in the *Journal of the A. M. A.* as follows: "The symptomatology of marked acidosis indicates plainly the serious character of its effects on the organism. It works insidiously but surely in all of its milder forms. In all conditions in which we have observed it, we find that the patient always improves remarkably whenever a slight acidosis disappears. On the other hand it aggravates concomitant affections and retards the progress of convalescence. As in diabetes it interferes with nutrition and lowers vital resistance."

The significance of acetone bodies in the urine has long been a matter of debate. It was at first thought they were derived from glucose because of their appearance in diabetes. Later their origin was ascribed to the proteins. It is now quite generally recognized that they are the result of an abnormal breaking down of fats. The physiologic process of fat digestion is to resolve it into  $\text{CO}_2$  and water with the liberation of heat. But when for any reason the tissues are unable to obtain sugar from the blood, fat is broken down with the production of betaoxybutyric acid, then diacetic acid and finally acetone by progressive oxidation. R. C. Cabot says

that the appearance of acetone bodies is due to a diminished utilization of carbohydrates, because: First, sufficient carbohydrates are not ingested; second, the sugar is not absorbed; third, the sugar is not assimilated.

Just what part the liver plays is not clearly understood. However, it is disturbed and overworked to such an extent that it is unable to care for the fat offered it and an acetone body acidosis is the result.

Under normal conditions the neutrality of the blood and tissue fluids is maintained by physiologic mechanisms and processes. While life exists in the animal body there occurs a regular formation of acids, excretory products of metabolism, principally carbonic, sulphuric, and phosphoric. They combine with basic or alkaline constituents of the blood and tissue fluids. The lungs excrete the carbonic acid, while the nonvolatile acids are excreted by the kidneys. A very slight change toward diminished alkalinity shows itself immediately by stimulation of the respiratory center which results in increased pulmonary ventilation and an increased output of carbonic acid. By this means the acid is eliminated and the reaction of the blood becomes normal, as likewise do the respiratory movements. Exercise clearly illustrates this: First increased acid production, then increased pulmonary ventilation until the acid products are eliminated. The kidneys also assist in maintaining the balance between acids and bases by reversing the reaction of neutralization of acid during the process of urine formation. The acid phosphate is removed and the base saved. This partially restores to the blood that alkali which has served as a carrier of acid. Finally, the ability of the body to neutralize acids by the production of alkali in the form of ammonia, is an important factor in maintaining the neutrality of the body fluids.

In acidosis, accumulation of acids occurs from the failure of elimination to keep pace with the production of acids. In diabetes, it results from an overwhelm-

ingly rapid production of acids which even a normal eliminating mechanism cannot keep up with. Or it may result, as in some cases of nephritis, from an inability of the kidneys to excrete the acids formed in ordinary metabolism.

The acetone bodies are not in themselves essentially toxic, apparently they are harmless except in enormous doses. Their danger is due to the fact that they *use up and remove the bases of the body* which leads to a reduction in the alkalinity of the blood. The body first relies on the reserves of sodium, potassium, calcium and ammonium to neutralize the acids. Chiefly ammonium which is present in large quantities, the result of the normal metabolism of the proteins. The ammonia combines with the acids and does not become converted into urea by the liver. Finally the supply of ammonia fails, and the alkalinity of the blood falls from a reduction of its bicarbonate content, and a fatal termination results unless something is done to restore the normal reaction.

The accumulation of acids from any cause always results in the lowering of the bicarbonate content of the body fluids. Because of this fact the determination of the bicarbonate content of the blood plasma is the most direct method of detecting and measuring the severity of an acidosis. It has been repeatedly demonstrated, however, that the  $\text{CO}_2$  content of the alveolar air maintains a constant ratio with the bicarbonate content of the blood. The pressure of  $\text{CO}_2$  in the alveolar air falls with increasing acidosis, rises under the administration of an alkali, as sodium bicarbonate, or when carbohydrates are fed, and during coma reaches a very low point. This method has as yet been confined mostly to the experimental laboratory because of difficulty experienced with the quantitative analysis of any gas. However, by this method acidosis is detected early and the evidence of coma known as early as forty-eight hours previous to its onset. Hence it can be readily seen that the introduction of simpler methods to determine the bicarbonate con-

tent or the degree of alkalinity of the blood will place the test among those that are considered indispensable in the practical management of disease and which would be as valuable, for instance, as is the blood pressure test in diagnosis.

Urine analysis is at present the most available means of chemical diagnosis of acidosis for those who do not have the utilities of special laboratory apparatus at hand. It must be borne in mind however, that the detection of acidosis by this means is dependent upon proper elimination by the kidneys. In certain forms of nephritis an acidosis of grave consequence may not be evidenced by the urinary findings. Hence it is always advisable in any case to apply a functional test to determine the eliminating ability of the kidneys, preliminary to accepting the urinary evidence.

The quantitative determination of ammonia or betaoxybutyric acid is a tedious undertaking. The detection of diacetic acid, however, is very easy and rapid and hence is the most practical as a routine test for acetone body acidosis or ketonuria, for diacetic acid is always accompanied by betaoxybutyric acid and acetone. The presence of diacetic acid in the urine is usually an evidence of a serious disorder of metabolism. It generally precedes the appearance of oxybutyric acid as acetone has preceded it. Diacetic acid is very volatile and disappears from the urine in from twenty-four to forty-eight hours, so that tests should only be carried out on perfectly fresh urine. One or 2 cc. of a 10 per cent solution of ferric chloride are added to a test tube one-half full of fresh unboiled urine, the precipitate of iron phosphate is filtered off and a few more cc. of the ferric chloride added to the filtrate, then if diacetic acid is present the solution will assume a deep red color, the so-called "Bordeaux red" or Gerhard's reaction.

The ingestion of certain drugs gives a color reaction similar to that caused by diacetic acid. The most common are the salicylates, phenacetin and antipyrin. To determine this a second quantity of the



urine is boiled and then tested as before. If the red color still remains it is due to some of the drugs, as boiling removes the diacetic acid. After acidulation with sulphuric acid the ethereal extract will also give the color reaction which disappears in twenty-four to forty-eight hours, while if due to salicylates the color is permanent.

The presence of diacetic acid, while not always an indicator that the acidosis is grave, should nevertheless be regarded as a danger signal and should make one alert to recognize any symptoms of a dangerous import and to guard against a possible fatal issue.

L. Blum has suggested a simple indicator of the actual condition of the system as to acidosis. He has found by repeated experiments with diabetics and controls, that from 5 to 10 grams of sodium bicarbonate are sufficient to render the urine of a normal person alkaline in reaction, with mild acidosis 20 grams, with an acidosis of moderate intensity 20 to 30 grams, while in severe cases 50 grams or more are required.

Palmer and Henderson say "A condition of acidosis may be assumed to exist when the administration of a quantity of alkali equal to 1 liter of N/10 alkali fails to produce a diminution in the acidity of the urine."

The application of these tests is both diagnostic and therapeutic.

Acidosis is characterized clinically by air hunger or dyspnea, more correctly called hyperpnea, acetone odor of breath, stupor, delirium, sometimes vomiting and convulsions and finally coma. The most constant and important of these is the hyperpnea, without cyanosis or any bronchial or lung obstruction. The respirations are increased and of greater depth and in severe types the air hunger is marked. This symptom is due to the increased acid or H-ion concentration of the blood which directly stimulates the respiratory center. With increasing acidosis the clinical picture of air hunger becomes more pronounced. Because of this fact, Prof. Hen-

derson of Yale has published a preliminary report in which he states that the time the breath can be held is an index of the degree of acidosis. The normal period is from 30 to 40 seconds. In some cases he found the patient was able to hold the breath but a few seconds. This same test has been recommended as indicating the patient's ability to undergo general anesthesia. Any period less than 20 seconds contraindicating. This test is of universal application. The patient should sit quietly for at least five minutes, then draw a full but not abnormally deep inspiration and hold it with the mouth closed and the nostrils compressed with the fingers while the observer notes the time.

The fruity odor of the breath is quite commonly observed without difficulty in ketonuria or acetone body acidosis. It sometimes permeates the entire room. A simple qualitative test for acetone on the breath is to have the patient breathe through a glass tube into a test tube containing a few cc. of an alkaline solution of mercuric cyanide and silver nitrate. Acetone will give an opalescent precipitate in such a solution.

Vomiting is quite often present and sometimes is quite intractable. This rapidly dehydrates the tissues and causes intense thirst.

Extreme nervousness is always present early, but this gives way to stupor as the acidosis increases.

Headache is of frequent occurrence and sometimes convulsions occur as the condition approaches coma.

It is well established that acidosis may occur in infants and children alone, and as a complication of other diseases. The younger the child, the higher the mortality. The disease always presents gastro-intestinal disorder, more or less diarrhea and almost always vomiting. There is fever usually low, and great restlessness, later stupor and finally coma.

Hyperpnea is always present and is a characteristic symptom. The acetone odor of the breath is quite evident. The urine

is scanty and contains acetone and diacetic acid. It must be remembered that acetone and diacetic acid often occur with febrile conditions in children and their appearance alone does not justify a diagnosis of acidosis. Conditions to be differentiated are meningitis, typhoid, infective gastroenteritis, and the exanthemata. Metcalf found in a series of 100 cases of acidosis of this type that 70 of the children had a nose, throat or lung complication. Others have found similar conditions showing the close relation between focal infection and acidosis. As a complication of severe diarrhea in children acidosis is a frequent and quite often fatal complication. This may be an acidosis due to retained acid phosphate and not due to the acetone bodies.

The treatment of acidosis in children consists mainly in the administration of alkalis, either sodium bicarbonate or potassium or sodium citrate. These may be administered orally, per rectum, subcutaneously or intravenously according to indications. A focal infection such as infected tonsils or adenoids should be taken care of. In addition those with acetone bodies present need starches and carbohydrates, and in all forms water is urgently needed to supply the tissues dehydrated from diarrhea and vomiting.

Howland and Marriot of Baltimore, who have investigated this type, would lay down a general maxim that as hyperpnea indicates acidosis, so hyperpnea indicates alkali therapy.

The important thing in treatment is to give the alkalis early, do not wait for the acidosis but keep the urine alkaline in all severe diarrheas of childhood.

The symptoms of acidosis are at present considered the most important in directing the treatment and prognosis of diabetes. Joslin of Boston reports that of 921 cases seen and traced by him, 425 have died. Of this number coma was fatal to 273 or 64 per cent, thus causing two-thirds of the deaths. Analyzing the deaths from coma, certain points are emphasized. First—Ether anesthesia is a burden which a light case may easily bear. It may

change a moderate to a severe one, and to a severe case it may be fatal. Second—Diabetic patients with vulnerable kidneys are peculiarly susceptible to coma because their power of elimination of acid bodies is impaired. Third—An infectious process renders the case more severe and coma more likely. Fourth—An occasional case of coma is precipitated by mental shock or excitement. Fifth—There is a definite influence exerted by a fat-protein or extremely fat diet. Joslin suggests excluding fats for several days before fasting to reduce glycosuria. Before inaugurating any particular diet for the diabetic patient, it is necessary to learn his ability to metabolize properly carbohydrates and sugars. All too often the diabetic patient is subjected to a sudden withdrawal of carbohydrates, frequently when he has a change of physicians or enters a hospital, which may precipitate an acute onset of coma. Of special importance is the recognition of acidosis in diabetics treated by the Allen method. Where the blood or alveolar air can be tested daily there is no particular danger in the few days' fasting to make the urine sugar free. The alcohol used during the fast usually serves to prevent acidosis. Paradoxical as it may seem, Allen has found that some patients with quite severe acidosis have improved wonderfully and became acid and sugar free on fasting and carbohydrate free diet. However he does not recommend this as a routine procedure. In all cases treated by this method it is advisable to administer alkalis and be especially on the lookout for any signs of acidosis during the initial fast. The diacetic acid test should be used as a routine in the examination of diabetic urine for its detection is of far more importance to the patient than the amount of sugar in any specimen. Its presence should be considered a danger signal and an indication for the liberal administration of carbohydrates and alkalis until the danger of acidosis is passed.

Bulgarian bacilli cultures have been strongly recommended in the treatment of



diabetes. The benefits derived from their use in this disease are certainly not striking, while certain clinicians have reported decidedly harmful results due to their acid producing qualities. When used for a considerable length of time they reduce materially the alkalinity of the intestinal secretions and thus tend toward the production of acidosis. It certainly is not logical to use an acid producer as a therapeutic agent in a disease where the most common fatal complication is acidosis.

The relation of acidosis to surgery is an important one. The patient with an acidosis is not liable to survive the effects of an anesthetic and operation unless proper preparation has been made. On the other hand acidosis may occur as a result of the anesthetic and operation, the so-called post-operative acidosis. Prolonged vomiting, starvation, and starch free diet often cause acidosis in previously healthy persons. To guard against acidosis related to continuous vomiting, starch should be given when possible in large quantities before the operation. There should not be too long a starvation period before the operation. Afterwards starch should be given again as soon as possible. Egg albumin water is not a good food alone. This applies to all long illnesses, such as typhoid, starch should constitute a part of the food.

Operations in diabetics are accompanied by three dangers: wound infection, non-healing, and diabetic coma. Too frequently the preparation for operation which the diabetic patient receives is a sugar and starch free diet. This is a useless procedure as it has been shown experimentally and clinically that the absence or decrease of hyperglycemia does not influence wound infection or non-healing. On the other hand this starch free diet increases greatly the risk from diabetic coma. Diabetic coma is definite clinical occurrence and should be regarded as the great danger in operations on diabetic patients.

The logical preparation is: First—To increase the patient's store of glycogen, as the fats are not burned and acidosis pro-

duced until the glycogen is used up. Second—A saturation of the tissues with alkali to assist in preventing the acidosis. Third—Prevention of shock in so far as possible. The oatmeal diet of Von Noorden seems the best way of increasing the glycogen store which we have at present. Sodium bicarbonate in sufficient doses to keep the urine alkaline and maintain it so after the operation, fulfills the second condition. As to shock, it is an old clinical observation that diabetic coma often follows physical or psychic trauma, such as breaking a leg or receiving bad news. Hence everything possible should be done to mitigate this important factor of danger. Perhaps Crile's method would fulfil the indications.

Fischer of Cincinnati has demonstrated experimentally and clinically that the body colloids in an acid medium will abstract considerably more water than the same colloids in a neutral medium, and also that the presence of acid in abnormal amount in the body not only increases the hydration capacity of the protein body colloids but also increases at the same time their capacity for holding sodium chloride. Because of this he maintains that the sodium chloride retention that is observed in certain forms of nephritis, pneumonia, pernicious vomiting, and so forth, is not the cause of the edema but really the result of an abnormal production or accumulation of acid in the body.

In all diseases in which kidney elimination is impaired, acidosis is a factor to be seriously considered. In nephritis, uremia, eclampsia and cardio-renal disease, acidosis may occur and add a grave complication to an already serious condition.

In regard to the treatment of acidosis with alkalis, one fact stands out unmistakably. That is, the absolute failure of alkalis in the treatment of coma. At best they are only of temporary benefit. It must be borne in mind that alkalis are only of service early in acidosis. They act by increasing the elimination of the acid bodies.

In view of these facts acidosis should

receive careful consideration in the management of acute and chronic disease in order that the occurrence may be guarded against.

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—R—

#### Class "C" Graduates in Kansas.—A Communication.

JOURNAL: I have just noticed the June report of the Kansas Board of Registration in the Journal of the A. M. A., November 4, and am surprised and chagrined to see the large number of Kansas City Class "C" medical college graduates registered in this state at that time, both by examination as well as reciprocity.

You will note that Class "C" graduates from Arkansas especially abound.

Reciprocity was instituted primarily for the benefit of old practitioners who could not be expected to pass the examination, but who were worthy on account of their ability and experience. Of the thirty-nine so registered only thirteen were graduated previous to 1910, and but four graduated before 1900, and only one of the thirty-nine could be called an old graduate (1882). Nine were from a Class "C" school in Kansas City, of the 1916 class, and registered in Arkansas, from which state thirteen were admitted, and all from discredited schools. Of the thirty-nine registered by reciprocity eighteen were from "C" schools.

Surely our State Board is informed of the situation existing between the Arkansas boards and the Class "C" schools of Kansas City. In view of the high standard of our own state medical school is there no way by which Kansas can be protected from the flood of ill prepared graduates who are debarred from nearly all of the other states?

A. SETTLE, M.D., Reading, Kansas.

—R—

#### Some Useful Suggestions.

H. W. DAVIS, M.D., Little River.

I was called eight miles in the country to see a child suffering with convulsions. Physical examination revealed only a distended bladder. I found I had nothing with me but a large metal catheter which, on account of its size, it was impossible to pass. Other measures were tried, such as hot applications, hot water, etc., but without success. A chicken was caught, a wing feather selected, cleaned, smoothed, fenestrated and sterilized, lubricated and inserted. A large amount of urine was withdrawn and no further convulsions occurred.

Sugar is oxytoxic and simple syrup as a vehicle for ergot makes an agreeable mixture.

A glass female catheter is a good substitute for a feeding tube.

A "two-for-a-nickel" fish line makes good umbilical tape.

A vaginal tampon saturated with a five per cent solution of quinine and urea hydrochloride seems to lessen pain when the head is distending the perineum.

Crushing the cord and tying in the crush is an excellent prophylactic against hemorrhage.

A toothpick makes a good applicator and probe.

—R—

If you do not see what you want in the advertising pages, write to the Journal about it. We will endeavor to tell you where to find it.

—R—

Every advertiser in this Journal is paying you to read what he has to say.



# THE JOURNAL

*of the*

## Kansas Medical Society

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### Dirty Doctors.

People are not strongly impressed by the views upon hygiene and personal cleanliness of a man who is not himself clean. People are but slightly impressed with the dangers of infection when they are examined and treated in an office which is most remarkable for its filth. We should ourselves be clean then we may speak authoritatively to those who depend upon us for advice. We should have clean methods for the care of our instruments, our dressings and our drugs, then we may hope to have the co-operation of our patients and their attendants in our efforts to avoid infections.

This subject of hygiene has become entirely too popular for the doctor who is too lazy, too indifferent, or too busy to apply the ordinary rules of sanitation to himself and his office. Cleanliness is no longer regarded as simply a matter of taste, but is now considered a prerequisite to good health. The people will not long tolerate a careless disregard of the most simple hygienic rules in those to whom they intrust the care of their ailments.

It is not well for one to be confident of his independence in this matter, because of his professional skill nor because of his lack of competition. The people are supreme and they have ways of correcting

obnoxious conditions that are effective if not always agreeable. In this connection it may be well to quote the following from a statement by the Secretary of the Board of Health:

"There has scarcely been a session of the Legislature when I have appeared before it and committees concerning work and appropriation for this department, particularly as related to the Division of Foods and Drugs, but what I have been humiliated, if not insulted by someone insisting that the Board inspect doctors' offices, which they state are often the dirtiest places in the various towns."

It would be rather humiliating for the legislature to require the regular inspection of doctors' offices. In Indiana the Board of Health has authorized its secretary to institute an inspection as to the sanitary conditions of the offices of physicians in that state, and at its meeting on October 17 passed the following resolutions:

"Whereas, frequent complaints have come to the members of the State Board of Health from citizens of this state concerning the dirty and unsanitary offices of doctors of medicine, and of dentists, and the members of these professions who are personally unclean, and

"Whereas, such dirty and unsanitary conditions are not infrequent, therefore be it

"Resolved, that the State Board of Health of Indiana is sincerely sorry that such unclean and unsanitary doctors' and dentists' offices exist in our state, and also that doctors and dentists are frequently seen who are unclean and unsanitary in their persons and habits, hence, we urge all physicians and dentists, and especially health officers, to keep their offices in a sanitary condition and to be clean in person and habit so that the public may look up to them as examples of clean and right living. And be it further

"Resolved, that we respectfully urge the great body of physicians and dentists who are or who are not clean and sanitary themselves to give their hearty support to

the State Board of Health in this very important matter, and by thus doing deserve the highest standard of respect as leaders of public thought and progress."

While nothing ever is—or is ever intended to be—accomplished by such resolutions, this action of the Indiana Board shows the tendency of public sentiment. More particularly so in this case since this action of the Indiana Board was due, it is claimed, to the many complaints it had received from the people.

The profession of Kansas would resent the adoption of such resolutions by its Board of Health, and justly so, for there is never a good reason for a few men to so insult the great body of their confreres. To call a man a thief, no matter how honeyed the words in which the allegation is clothed, does not prove him to be a thief, it does not punish him for his thieving nor does it prevent his continuing to be a thief, but it does intentionally offer him insult.

If the unsanitary condition of doctors' offices has reached the resolution stage in Indiana it has reached the action stage in Kansas. We do not mean that Kansas doctors are as unsanitary as those in Indiana, but in Kansas we do things first and talk about them afterwards.

The relation of cleanliness to Godliness is not now a matter of such moment as the relation of uncleanness to the spread of disease. The man who does not realize and fully appreciate the importance of the latter relation is incompetent to practice medicine. No matter how perfect his mechanical skill, how acute his diagnostic acumen, how wide his experience, how ponderous his wisdom, if he has not a practical appreciation of the principles of sanitation he must fail in a test for efficiency with both his profession and the people.

There are conditions in which uncleanness is criminal. It should be as great a crime for an unclean doctor to attend a woman in confinement as it is for another doctor to produce an abortion. It should be a crime for a doctor to dress a clean

wound in the atmosphere of a dirty office. It should be a crime to use any instrument which has not been recently sterilized, in the nose or mouth, in the urethra, or vagina, or rectum of any patient.

If the unsanitary state of any doctor, or any number of doctors in Kansas is such as to menace the health of those he is called to visit, or if the unsanitary condition of any doctor's office, or any number of doctors' offices in the state of Kansas is such as to menace the health of those who call to consult him, the remedy lies in the police power of the state. If the correction of these conditions does not fall within the power delegated to the Board of Health, then let us have such legislation as will give them such authority. Although any legislation along this line would be humiliating, it would not be discouraged by the medical profession of Kansas, for it does not oppose the enactment of laws which have for their purpose the enlargement of its efficiency or the improvement in the health conditions of the people.

Do we need legislation to correct such faults among ourselves? Do we need legalized inspection? Do we need resolutions? Let each one of us constitute himself a committee of inspection. Let each of us visit another doctor's office and spy out the dirt, look at the floors, the cases, the shelves, the instruments and drugs, look under the tables and cabinets, but don't say anything about what we find—just go back and clean our own office, clean the dirt out from the corners, from under the sofa and the table and wherever else it may be found. If each of us will do this there won't soon be a dirty doctor or a doctor's dirty office in the state. It is a strange fact but a very true one that a fellow's office always looks cleaner to himself than to the other fellow.

"In other men we faults can spy,  
And blame the mote that dims their eye;  
Each little speck and blemish find;  
To our own stronger errors blind."

—R—

Help out your Journal and it will help you.



### The Lecture Bureau.

The Lecture Bureau for county societies is fairly complete and dates are being made for regular meetings. Please remember that speakers for public meetings should be arranged for with Dr. Nesselrode. A list of the speakers and subjects for public meetings was published in the November number.

Some of the societies wish to arrange for one or two of the Bureau lectures for every meeting. This can easily be done, but it will be a great convenience to us if such dates can be made several months in advance. We would suggest that lists of the places and dates of meetings be sent in now and we will arrange for the lectures accordingly.

The subjects which we give in the list below are all of practical interest and we can vouch for the ability of the men who are to present them. You can have one or two of these men at as many of your meetings as you wish.

#### LIST OF SUBJECTS AND LECTURES.

Dr. John Sundwall, Department of Anatomy, Kansas University, Lawrence.

- (1) The Structure and Function of the Ductless Glands.
- (2) Otonomic Nervous System.

Dr. C. C. Goddard, Leavenworth.

Sexual Perversion and Its Effects on Mental Stability.

Dr. W. K. Trimble (K. U. Clin. School of Med.), Kansas City, Mo.

Syphilis.

Dr. W. F. Bowen, Topeka.

Cholelithiasis.

Dr. R. C. Lowman, Kansas City, Kansas.

- (1) Fractures of the Skull.
- (2) Acute Surgical Conditions of the Abdomen with Particular Reference to Diagnosis.

Dr. C. F. Menninger, Topeka.

Cystoscopy.

Dr. Richard L. Sutton, Kansas City, Mo.

- (1) Treatment of Skin Cancer—Skin Clinic.
  - (2) Treatment of Syphilis—Skin Clinic.
- Dr. W. W. Duke, Kansas City, Mo.

(1) The Practical Treatment of Diabetes Mellitus.

(2) The Systemic Effects of Certain Focal Infections.

(3) The Relations of the Internal Secretions to Development and Health.

Dr. Ralph Major (K. U. Clin. School), Rosedale.

Etiology of Nephritis (illustrated).

Dr. E. J. Curran (K. U. Clin. School), Rosedale.

Glaucoma and Its Relation to General Medicine.

Dr. M. T. Sudler (Dean Clin. School), Rosedale.

Diseases of the Prostate (illustrated).

Dr. A. L. Skoog, Kansas City, Mo.

- (1) Brain Tumor. Lantern slide demonstration.
- (2) Cerebrospinal Fluid Work. Lantern slide demonstration.
- (3) Acute Polymyelitis. Lantern slide demonstration.

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#### Committees for 1916.

The following standing committees have been appointed by the President, Dr. Jas. W. May:

*Committee on Public Policy and Legislation—*

Dr. J. E. Sawtell, Kansas City.

Dr. W. E. McVey, Topeka.

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*Committee on Public Health and Education—*

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Dr. M. T. Sudler, Lawrence.

Dr. O. D. Walker, Salina.

Dr. S. J. Crumbine, Topeka.

Dr. Emma L. Hill, Oswego.

*Committee on Scientific Work—*

Dr. Chas. S. Huffman, Columbus.

Dr. J. D. Riddell, Salina.

Dr. James W. May, Kansas City.

*Committee on Necrology—*

Dr. O. D. Walker, Salina.

Dr. Chas. S. Huffman, Columbus.

*Committee on Asexualization—*

Dr. O. P. Davis, Topeka.

Dr. J. T. Axtell, Newton.

Dr. Geo. M. Gray, Kansas City.

*Committee on Statistics—*

Dr. M. T. Sudler, Lawrence.

Dr. O. D. Walker, Salina.

Dr. J. E. Sawtell, Kansas City.

—R—

**Clinical Material at the Medical School.**

The following extract from the annual report of the Bell Memorial Hospital shows the number of cases treated there and at the Dispensary for the year ending June 30, 1916:

Total number of patients admitted.	1,109
Daily average attendance .....	45.3
Patients in hospital July 1, 1915...	36
Patients in hospital June 30, 1916.	40
Total number of patients days, 1915-1916 .....	16,541
Average length of stay in days...	15
Number of visits paid to dispensary .....	11,227
Number of new patients to dispensary—attendance .....	536
Pasteur treatments given for the prevention of hydrophobia— number of cases.....	35

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**National Board of Medical Examiners.**

The National Board of Medical Examiners held its first examination from October 16 to 21, in Washington, D. C.

There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination.

The following men passed:

Dr. Harry Sidney Newcomer, Johns Hopkins University.

Dr. William White Southard, Johns Hopkins University.

Dr. Orlow Chapin Snyder, University of Michigan.

Dr. Thomas Arthur Johnson, Rush Medical School.

Dr. Hjorleifur T. Kristjanson, Rush Medical School.

The second examination will be held in Washington, D. C., June, 1917. Further information may be had by applying to Dr. J. S. Rodman, Secretary, 2106 Walnut St., Philadelphia, Pa.

**SOCIETY NOTES.****SEVENTH DISTRICT MEDICAL SOCIETY.**

The Medical Society of the Seventh District met October 26, 1916, at Hutchinson, Kansas. The following program was rendered, interspersed with music, and a recess was taken and refreshments served.

Leukemia—Dr. Henry E. Haskins, Kingman, Kansas.

Intestinal Obstruction—Dr. William P. Callahan, Wichita, Kansas.

Case Reports—Reports limited to ten minutes each and one case from each member present. Discussion limited to three minutes for each member present.

Otitis Media—Dr. W. H. Williamson, Hutchinson, Kansas.

Tonsillotomy as Curative of Nephritis—Dr. H. B. Pope, Kingman, Kansas.

Whooping Cough—Dr. Wm. F. Schoor, Hutchinson, Kansas.

The following resolution was adopted by the Society, with the request that it be published in the Kansas State Journal and requesting every county and district society in the state to adopt similar resolutions:

We, the members of the Seventh District Medical Society, in session October 26, 1916, recognizing the great benefit to be derived from sanatorium treatment of tuberculosis both in its early and late stages, and likewise knowing that the facilities at our State Tuberculosis Sanatorium are absolutely inadequate to the needs of the State of Kansas, do hereby petition the honorable members of our State Legislature to take immediate steps toward the establishment of more adequate hospital facilities so that our improvident



citizens who are so unfortunate as to contract this disease may be cared for properly.

Lloyd A. Clary

G. A. Blaisdel

Maggie L. McCrea

Adoption unanimous. Committee.

W. F. SCHOOR, Secretary.

#### MORRIS COUNTY SOCIETY.

The Morris County Medical Society met in Council Grove on November 21, 1916. The following papers were presented: Pyelitis in Children, by Dr. Woodmansee; Vasomotor Rhinitis, by Dr. Chas. Mikula.

#### WYANDOTTE COUNTY SOCIETY.

The Wyandotte County Medical Society met in the Mercantile Club Rooms in Kansas City, Tuesday evening, December 5. The following program was prepared:

Fractures of the Lower End of the Humerus, by Dr. Hassig.

Vaccine Therapy, by Dr. Milne.

#### MONTGOMERY COUNTY SOCIETY.

The Montgomery County Society met at the office of Dr. J. H. Johnson, Coffeyville, on November 17. The following program had been prepared for the meeting.

Nephritis, by Dr. C. G. McCormick.

Intoxication, by Dr. J. Baird.

Paper by Dr. F. W. Duncan.

Paper by Dr. Chas. S. Campbell.

#### HARVEY COUNTY MEDICAL SOCIETY.

The following program was prepared for the December meeting of the Harvey County Medical Society:

The Doctor as a Business Man, Dr. A. E. Smolt.

Three-Minute Talks—

Case Records, Dr. R. H. Hertzler.

Account Keeping, Dr. J. L. Grove.

Fees, Dr. Max Miller.

The Building of an Office Practice, Dr. L. T. Smith.

Office Business Cash, Dr. R. S. Haury.

General discussion.

Election of officers.

#### REPUBLIC COUNTY SOCIETY.

The Republic County Medical Society held its annual meeting at the office of Drs. Kamp and Thomas in Belleville on Wednesday, November 29. The following officers were elected for 1917:

President, Dr. D. E. Foristall, Republic City.

Vice-president, Dr. J. C. Sherrard, Norway.

Secretary-treasurer, Dr. H. D. Thomas, Belleville.

A case report of septic embolism and one of gangrene of feet due to freezing was presented.

The next meeting will be held in the early part of 1917 and arrangements will be made to have one of the speakers from the Lecture Bureau. It is also planned to have a public meeting.

H. D. THOMAS, Secretary.

#### SHAWNEE COUNTY SOCIETY.

The annual meeting of the Shawnee County Medical Society was held in the Elk's Building on Monday evening, December 4. The annual address was delivered by the president, Dr. T. C. Biddle. The following officers were elected for the ensuing year:

President, M. B. Miller.

Vice-president, W. F. Bowen.

Secretary, E. G. Brown.

Treasurer, W. M. Mills.

Censor, W. E. McVey.

After the election of officers a buffet luncheon was served and the evening was finished with a very informal program of speeches and stories, under the direction of Dr. W. C. McDonough, master of ceremonies.

The name of the Louisville Monthly Journal of Medicine has been changed to the Mississippi Valley Medical Journal and it has also been made the official organ of the Mississippi Valley Medical Association. It will still be published at Louisville.

## MISCELLANEOUS.

### New and Nonofficial Remedies.

Swan's Bacillus Bulgaricus.—A pure culture in tubes of the bacillus bulgaricus. It is designed for internal administration and for direct application to body cavities, abscesses and wounds. The culture is supplied in boxes of twelve tubes. The tubes must be kept in a cool place and must not be used after the date stamped on the package. Swan-Myers Company, Indianapolis, Ind. (Jour. A. M. A., November 25, 1916, p. 1601).

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### Propaganda for Reform.

Patent Medicine Prosecutions Under the Food and Drugs Act.—The following information was brought out in connection with prosecutions by the federal authorities chiefly under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Dr. Porter's Antiseptic Healing Oil was found to be essentially a solution of camphor and carbolic acid in cottonseed oil. It was claimed to be an excellent remedy for cuts, sores, old chronic ulcers, corns, bunions, and a preventive of whooping cough, diphtheria and tuberculosis. Ballard's Horehound Syrup Compound was sold "For Consumption, Coughs and Colds" and other diseases. Dr. Shoop's Night Cure was claimed promptly to cure ulceration, inflammation or congestion of the womb, leucorrhea, painful ovaries and other female diseases. It was found to be a suppository containing zinc carbonate, zinc sulphate and boric acid in a cacao butter. Dr. Shoop's Cough Remedy was found to be a syrup containing ammonium benzoate and probably white pine tar and gum. Dr. Shoop's Restorative was sold for the cure of all diseases of the stomach, liver and blood and still other diseases. Father John's Medicine was advertised as a consumption "cure." Dr. Shoop's Twenty Minute Croup Remedy was found to be a syrup containing glycerine and a small amount of salicylic acid. Bad-Em Salz was found to

consist of sodium chloride, sodium sulphate, sodium bicarbonate, and a small amount of tartaric acid. It was sold with claims suggesting that it was derived from European springs and that it dissolved gallstones and gravel in the kidneys or bladder. Kennedy's Cal-Cura Solvent was a water-alcohol liquid containing 2.44 per cent potassium acetate, 16.75 per cent alcohol, 52.46 per cent cane sugar and vegetable matter resembling mint, cardamom and boneset. From the claims which were made one would get the impression that there could be few ills that it would not cure. (Jour. A. M. A., November 4, 1916, p. 1385-6.)

Intravenous Therapy.—The technic, although not difficult, must be thoroughly mastered, or undue pain, infection, air embolism, or even death may result. Often a drug has an action different from that obtained by the usual method of administration. Deaths have resulted not only from a lack of proper technic, but also from a lack of knowledge of drugs so administered. Thus death has followed the injection of an iron preparation containing peptone, and also following intravenous injection of ether. Intravenous injections, while sometimes superior to the slower methods, are distinctly inferior when a continuous rather than a sudden action is desired as with iodids, nitrates, iron or salicylates. Intravenous injections should not be resorted to unless distinct advantages are to be secured, as when immediate action is necessary in emergencies, where the drug is not otherwise absorbed or is destroyed in the stomach. In the light of our insufficient knowledge of the action of simple drugs when administered intravenously, the injection of complex mixtures of drugs is particularly reprehensible. (Jour. A. M. A., November 11, 1916, p. 1450.)

Sleepy Water.—Chicago physicians are told by the Sleepy Water Corporation that Sleepy Water is a "cure" for diabetes, Bright's disease and many other ills. The claim is also made that for six years not a single case of nephritis or diabetes



treated with this water has failed to be cured. Sleepy Water sells for a dollar a gallon, but you cannot buy less than fifty gallons. At least a gallon a day must be taken and even five gallons a day may be taken "without any detrimental effect upon the heart action, no matter how bad the heart action seems to be." If we are to take a corporation's word for it, "Sleepy Water" has performed many miracles, although details of its *modus operandi* are not forthcoming, "as no autopsy has been performed on a person cured by Sleepy Water." (Jour. A. M. A., November 18, 1916, p. 1530.)

**Human Ease.**—The federal authorities have issued a fraud order, denying the use of the mails to the Human Ease Medicine Co., of Atlanta, Ga. Human Ease was guaranteed "to cure all diseases both in and on man and beast." Analysis showed it to be an ointment composed of lard, with a little sodium bicarbonate sodium sulphate and potassium nitrate, flavored with oil of sassafras. (Jour. A. M. A., November 18, 1916, p. 1540.)

**Some Misbranded Nostrums.**—The following "patent medicines" were found misbranded by the federal authorities: A. D. S. Cod Liver Oil Comp., claimed by the American Druggists' Syndicate to be a sovereign remedy in pulmonary tuberculosis, was not possessed of the virtues claimed, nor a preparation of the active principles of pure Norwegian cod liver oil. Johnson's Chill and Fever Tonic, claimed to be a "guaranteed remedy" for dengue fever, typhoid fever, measles and la grippe, was a watery solution of epsom salts and cinchonin hydrochlorid. A. D. S. Peroxide Talcum Antiseptic and Deodorant, sold by the American Druggists' Syndicate with the claim that it contained a peroxide and to be a wonderful antiseptic and germicide, was found to have no antiseptic properties and no detectible peroxide. Dr. King's Royal Germetour, claimed to be a "germ destroyer," was found to consist essentially of 98 per cent water and 2 per cent sulphuric acid, saturated with hydrogen sulphid. (Jour. A. M. A., November

18, 1916, p. 1541.)

**What Ailed Him?**—A druggist wants to know what ailed the patient for whom the following was prescribed: Calomel 1 grain, potassium iodide 4 drachms, potassium bromide 3 drachms, potassium citrate 5 drachms, tincture of aconite 2 fluidrachms, wine of ipecac 1 fluidounce, chloroform water to make 3 fluidounces. Without venturing a guess regarding the patient's illness, it is suggested that if anything new was wrong with the patient after he took the medicine, the case may be diagnosed as one of misplaced confidence, either the physician's misplaced confidence in drugs or the patient's misplaced confidence in the physician. (Jour. A. M. A., November 18, 1916, p. 1541.)

**Tartrates in Nephritis.**—While the vegetable acids, such as citrates, burn to alkali in the body, the tartrates are not so converted, and leave the body nearly in their original form. Underhill and others have shown that tartrates in large doses can cause tubular nephritis in animals. While human beings tolerate without apparent kidney disturbance small doses of tartrates, either given medicinally or as they occur in baking powders and in certain foods, and while it would probably require very large doses to cause kidney inflammation, it would seem inadvisable to give food rich in tartrates or to give medicinally large doses of tartrates in nephritis. (Jour. A. M. A., November 25, 1916, p. 1601.)

**More Misbranded Nostrums.**—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because of unwarranted and false therapeutic claims: Dr. Jones' Liniment was recommended for corns, toothache, backache, "rheumatism," and various other conditions. Analysis showed it to be "essentially a gasoline solution of oleoresin of capsicum, oil of sassafras, methyl salicylate, and evidently, volatile oil of mustard." Graham's Dyspepsia and Heartburn Remedy was found to contain, among other things, sodium bromide, sodium bicarbonate, magnesium carbonate,

sugar, chloroform, alcohol and small quantities of morphine. It was asserted to be a remedy for gastritis, ulceration or threatened cancer of the stomach, and all disorders arising from an impaired digestive system. Mother Hart's Baby Syrup admittedly contained opium and alcohol. It was asserted to be "A safe remedy for the home." Dr. Hale's Household Ointment was sold as "A positive specific for the speedy and permanent cure of rheumatism, lame back, neuralgia," and many other conditions. Analysis showed the ointment to be composed of "vaseline and camphor with a small amount of aromatics resembling oil of thyme." Dr. Greene's Nervura was sold for nervousness, nervous debility, weakness, poor blood, etc. It was found to contain 18 per cent of alcohol, and celery, ginger and other unidentified vegetable material were indicated. Hill's Freckle Lotion was claimed to be absolutely harmless when used externally according to directions. Yet it was found to contain corrosive sublimate. Dr. Hiatt's Germicide was sold as a specific for croup and for diphtheria, quinsy, sore throat, etc. It was a syrup containing sodium benzoate, phenol, alcohol, a small amount of glycerin, probably balsam of tolu and flavored with oil of wintergreen. (Jour. A. M. A., November 25, 1916, pp. 1615 to 1616.)

Unna's Paste for Varicose Veins.—In the treatment of varicose ulcers of a mild form Dr. Ochsner prepared a boot composed of several layers of a bandage, each treated with Unna's Paste applied hot. The paste consists of gelatine 4 parts dissolved in 10 parts hot water to which 10 parts glycerine and 4 parts zinc oxide are added. (Jour. A. M. A., November 25, 1916, p. 1617.)

Toilet Lotion.—Nothing is better to soften and whiten the skin than the official cold cream. For oily skins a tragacanth lotion is suitable. (Jour. A. M. A., November 25, 1916, p. 1618.)

Since acidosis is now known to be much more frequent than it was formerly

thought to be, and also because it is an important factor in diseased conditions, the Battle Creek Sanitarium now includes the test for it in the general examination of all patients who enter the institution. Fortunately the evil can best be corrected by a proper diet. The direct test of the blood is objectionable on account of the amount of blood required, while urinary analysis is not sufficiently certain. The most practical means is the analysis of expired air, because there is a known relation between acidosis and the CO<sub>2</sub> contents of expired air, this being diminished when acidosis is present. A method has been devised at the institution for collecting expired air which is simpler than any in use hitherto and furthermore can be employed under all circumstances. The co-operation of the patient is not necessary, so that even in cases of unconsciousness there is no hindrance.

—R—

#### **New Head for Frank S. Betz Company.**

LOUIS R. CURTIS, FORMERLY OF ST. LUKE'S HOSPITAL, CHICAGO, ELECTED PRESIDENT OF WELL KNOWN SURGICAL INSTRUMENT HOUSE.

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for eighteen years superintendent and secretary of St. Luke's Hospital, Chicago, as president of the Frank S. Betz Company.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as assistant superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital, Mr. Curtis went to the General Hospital of Elizabeth, New Jersey, staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as superintendent, and has been the dominating figure in that institution, both as superintendent



and secretary, until recently, and is now vice-president in charge of the operation of the institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the company as chairman of the board of directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the company.

—R—

#### **Fear as a Factor in Disease.**

The factor of fear in nervous cases is the subject of an article by H. T. Patrick, Chicago (Journal A.M.A., July 15, 1916). In many cases, he says, this factor is quite obvious but in many other equally important ones it is not at once apparent and of the latter class there are numerous varieties. One group embraces patients of known physical courage, of which he gives several instances. They fear the unfamiliar—the things to which they are unaccustomed: German students, he says, are timid about bare knuckles but are not a bit afraid of the Schlager that hacks their faces to pieces. The one almost universal fear of the human race is that which follows death, a thing of which we are absolutely ignorant. The question is largely one of temperament and it is important to distinguish it from morbid impulse, another type of the phobias. Intellectuality seems to be no protection against these. An interesting type of case frequently misunderstood is when the patient suffers from the physical results of the fear but is quite unconscious of its origin. Sometimes it is easy to unearth the fear and its origin. At other times it is diffi-

cult, and Patrick relates cases illustrating these types. Occasionally the physical manifestations are pronounced, though the patient knows perfectly well that a groundless fear is the cause. To elucidate a case of phobia one must go back to the first appearance of the symptoms and investigate the circumstances surrounding it. The patient has as a free requisite a hypersensitiveness or impressibility. Some are hard to account for, as are the antipathies. The remedies most frequently prescribed are absolutely futile, except for their suggestive value. Treatment must necessarily be educational and moral, much as we would educate a child out of some propensities or habits.

—R—

#### **Epilepsy.**

In reply to the articles of Caro and Thom and of Wherry and Oliver in recent numbers of the Journal which seemed to throw doubt on the bacillus epilepticus as a cause of epilepsy, C. A. L. Reed, Cincinnati (Journal A.M.A., Oct. 14, 1916), defends his view, expressed in his former articles, in which he claimed to show the relationship of constipation to epilepsy. This was forced on his attention in certain cases in which patients came to him for surgical relief. The Roentgen-ray findings in 800 cases were the foundation of his belief and that certain of these patients have apparently recovered seems to confirm it. After careful consideration of all the symptoms in nearly 200 of these cases, we are forced logically to recognize that the probable cause of epilepsy was intestinal intoxication, due either to bacterial activity or chemical changes. To investigate the bacteriologic phase of the question, he then placed Dr. E. T. Hyatt, assisted later by Dr. L. G. Forrer, in charge of his laboratory, and after a long search the former reported the discovery of an organism peculiar to the blood of epileptics which, injected into the blood of rabbits, caused symptoms of epilepsy and could be again obtained from their blood. The issue between him and the authors mentioned is whether this organism exists,

whether it is only a contamination, or whether it has any connection with diagnostic epilepsy. The fact of its existence seems fairly well attested and he gives references to authors who have reported it. Of course, the possibility of contamination is always present but it was recognized and provided for by Hyatt, as indicated in his former articles. It is strange, however, Reed says, that this particular contamination, if it is such, should be found only in epileptics and that in localities as widely apart as this country and Europe. The failure to find it in the blood of epileptics or to see the symptoms observed by Reed from injections into rabbits is, he thinks, of minor importance, since they fail to find it themselves in the blood of epileptics and had to use cultures in some places which might be less in virulence. Whether or not it is a variety of bacillus subtilis is also of minor importance, as it would only signify that some member of that group is an active agent in producing epilepsy. In view of all these facts it is evident that the onus of failure to find the organism must be with those who fail, and they must explain it. The inference which might be drawn from their failure to find the organisms in blood in six of Reed's own cases, that he did not supply them with more cases fearing similar results, is resented. The ratio of positives to negatives in Dr. Hyatt's examinations shows that several examinations may be needed before asserting positively that they are negative. In conclusion he refers to the work of Marie Bra in Europe, who published a similar discovery some years ago which was also rejected by medical writers.

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#### Cure of Thrombosis by Massage.

J. A. Caldwell, Cincinnati (Journal A. M. A., October 28, 1916), reports a case of a man whose left arm was crushed by a gas explosion. On regaining consciousness, his left hand felt numb and was cold. Local treatment caused no improvement, and a thrombus was diagnosed. The brachial artery was exposed by incision and

the points noted where pulsation could be felt, thus locating the thrombus. The vessel was stroked proximally, and after three or four strokes the interne who had held his finger constantly over the radial announced that good pulsation had returned. The wound was closed and the next day the pulse was equal in both radials. Evidently a thrombus was broken up by the massage and the clot carried further on. In the forearm the collateral circulation is so free that complete occlusion of either radial or ulnar causes practically no barrier to good nourishment of the hand. The case is reported to emphasize the necessity of prompt action in the operative relief of thrombosis before damage to the intima have been caused.

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#### MISSIONARY HOSPITAL WORK IN INDIA.

Qualified medical man required who is in sympathy with religious work. Passage paid and a small monthly allowance made. Three years' agreement. Apply, sending copies of testimonials. COMMISSIONER THOMAS ESTILL, Salvation Army Headquarters, 108 N. Dearborn Street, Chicago, Illinois.

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Do you recall giving a detail man about twenty minutes of your time last week? Does the firm he represents advertise in your Journal? Why does he not? Did he pay you for your time?

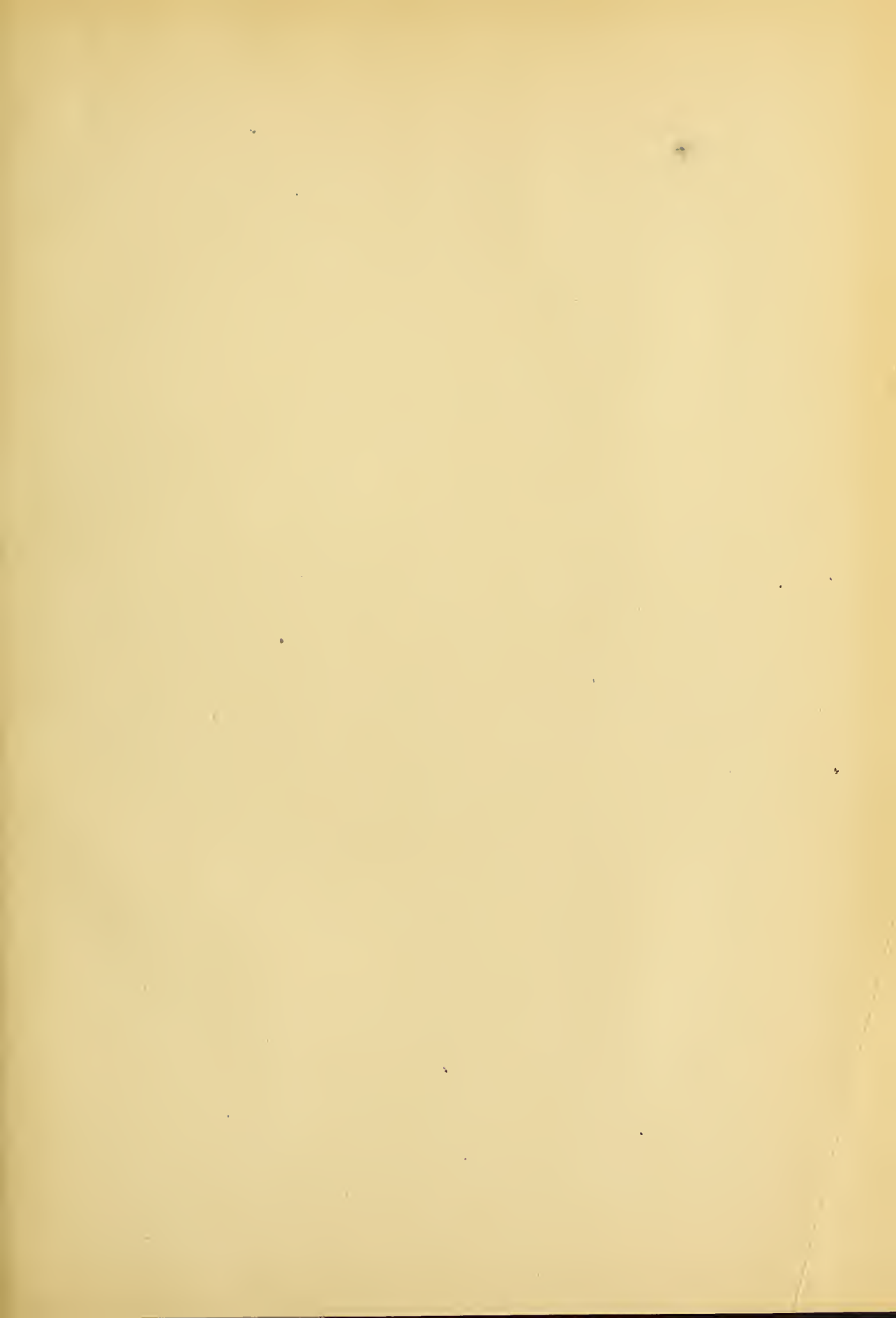
#### WANTED—FOR SALE—ETC.

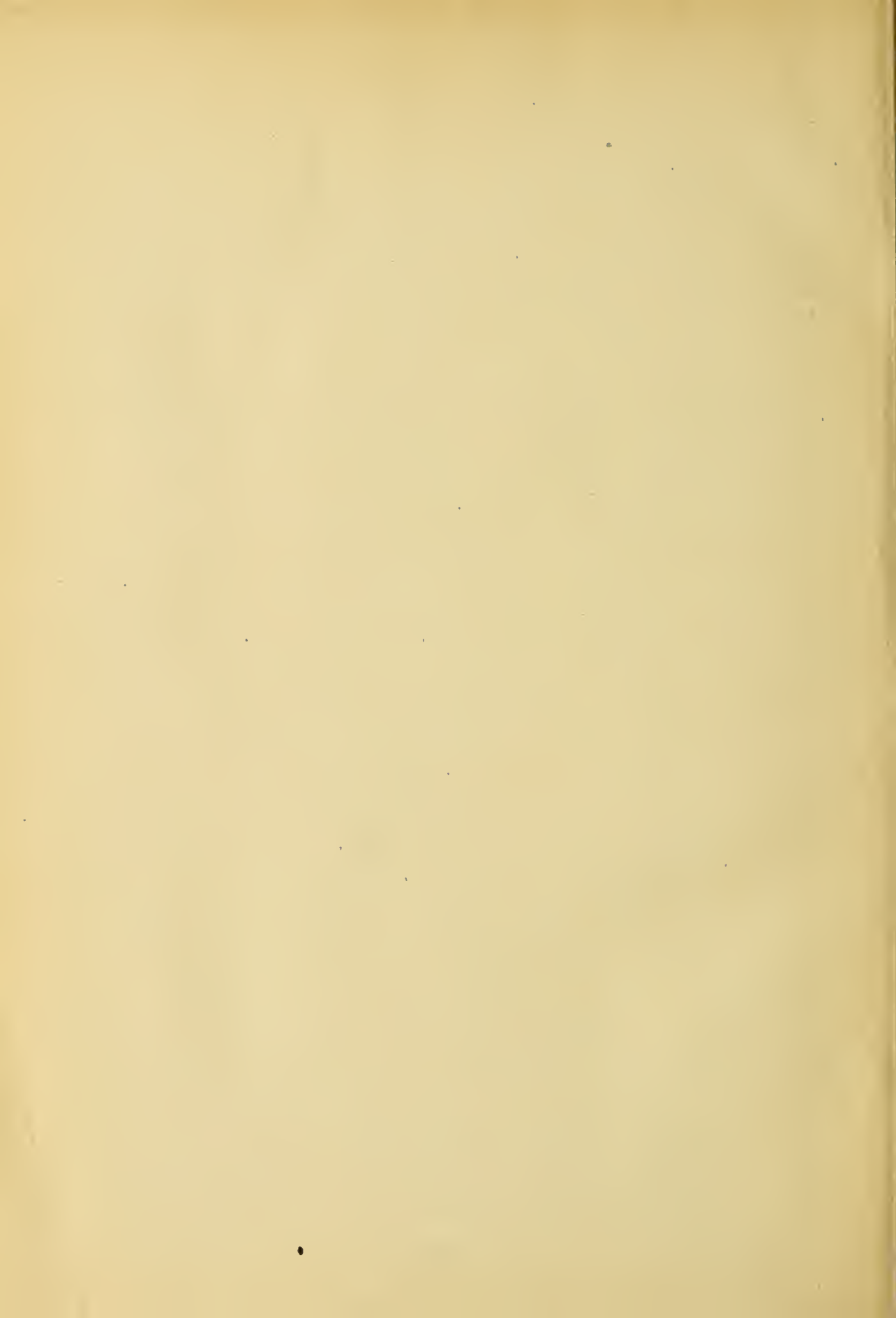
FOR SALE OR TRADE—Betz 24-Plate Static Machine and Salvanic Wall Plate, made for batteries, dry cells. Will sell cheap for cash or will trade for Ophthalmometer, motorcycle, automobile, or anything else I can use or amuse myself with. French M. Smith, Lyndon, Kansas.

WANTED—To buy, lease or relieve medical practice in Kansas wheat belt preferred. Must have four-year high school and electric lights and pay over \$3,000. Give full particulars in first letter. Address C. B. Carpenter, 2517 Cleveland Ave., Kansas City, Mo.

FOR SALE—A \$4,000 practice in a good town of 1,500 with four churches, two schools, library, electric lights, etc. A snap for good man who will buy fixtures amounting to about \$300. Retiring from practice. Address "I," care Journal.









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